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INDEXED

# TREES, SHRUBS AND PLANTS



THE GRIESA NURSERIES  
Lawrence, Kansas

QUALITY SINCE 1880

# Friends and Patrons

## Both Old and New

We wish to express our thanks for the splendid support received from you since 1880, when our business had its modest start. Our progress has depended from the beginning upon the loyalty of our friends and customers. Our aim has been to give you not cheaper, but better stock.

In the publication of this book, we aim to bring you a little closer to our nursery, to show you, through the wonder process of color photography, the flowers, fruits and trees as they appear in life. Our location and experience in growing and caring for the stock enables us to produce for you the best possible forms of plant life. Your privilege is that of selecting the plants, caring for them and reaping the harvest in both pleasure and profit.

We deliver our customers stock that warrants the fullest degree of satisfaction. It is grown in the Kaw River Valley on the finest ground obtainable. Our climate is such that stock grown here will thrive in all parts of the United States. Our storage, packing and railroad facilities are such that we can handle your business promptly and economically.

**THE GRIESA NURSERIES**  
T. E. GRIESA, Proprietor  
Lawrence, Kansas

# FRUIT DEPARTMENT

## Apples

THE Apple is the first in importance of all fruits. It will thrive on nearly any well drained soil. Its period of ripening, unlike other fruits, extends nearly through the whole season. By making careful selection, a constant succession can be obtained. For family use there is no fruit that is more indispensable. No fruit is so healthful and many physicians say that if a person would eat an Apple a day he could dispense with doctor bills. Besides this, and just as important, is the fact that the average price on the market is steadily increasing and the immense demand for home consumption, foreign shipping, canning and evaporating assures high prices. The Apple, if given the same care and attention as other farm crops, will yield greater returns per acre. The following list we consider to be the best for general planting.

Early Harvest Apple.



### Early Summer Varieties

**DUCHESS OF OLDENBURG.** Season, July and August. Tree upright, vigorous and extremely hardy. An early and annual bearer of uniformly large crops. Fruit large, greenish yellow, with red stripes. Flesh light yellow, medium fine grain, firm; flavor a pleasant acid; a great cooking and fine market sort.

**EARLY HARVEST.** Size medium, roundish, usually more or less oblate, smooth, bright straw color when ripe; flesh nearly white, flavor rather acid, fine. Season July. Productive. Needs rich cultivation to be fine. Good throughout the Northern States and Southwest.

**RED ASTRACHAN.** Season July. Tree upright, spreading, vigorous growth; an early and abundant bearer. Fruit above medium, greenish-yellow, almost covered with mottled and striped crimson; flesh white; crisp, juicy, brisk acid; good.

**RED JUNE.** Size medium, oblong, with brilliant red skin; flesh white, tender, juicy, sub-acid, with a sprightly agreeable flavor; quite early and continues to ripen for four weeks, and will keep long after ripe for a Summer Apple; profitable for market. The tree is a fine, erect grower, very hardy, bears young and abundantly. A valuable early Apple.



Duchess Apple.



**Maiden Blush Apple.**

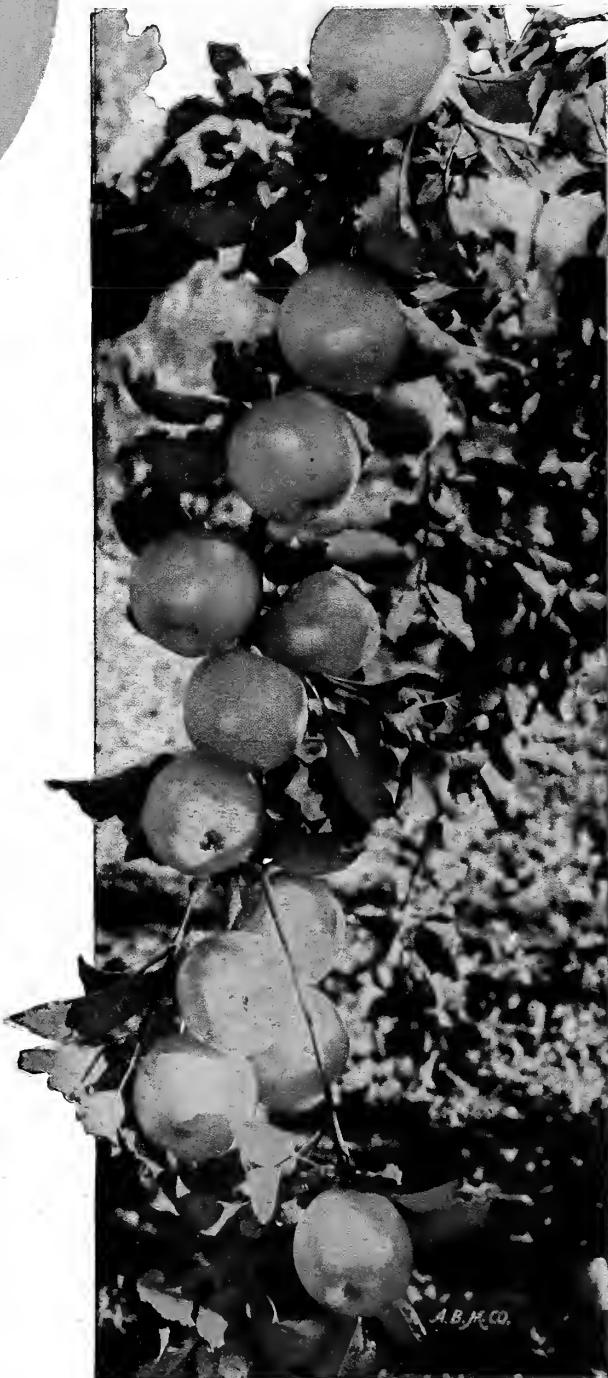
**MAIDEN BLUSH.** Of uniformly good size, smooth, round, beautifully flushed with red on creamy yellow ground; flesh tender, of pleasant but not high flavor. A good market sort because of its attractiveness. Tree is a heavy cropper. August.

**RAMBO.** Size medium, oblate, smooth. Greenish yellow, streaked and marbled with dull red dots. Flesh tender, rich, mild sub-acid, fine flavored, often excellent. Late Autumn and early Winter.

**WEALTHY.** Is now extensively planted in all the Apple-growing States and may be termed the best Apple of its season. Fruit large, regular, smooth, light yellow with crimson stripes and splashes; flesh white, often stained with red, tender, very juicy, sprightly sub-acid with delicious aroma. Splendid desert and cooking Apple. Fine for home garden as well as commercial orchards. Season, September to January. (Illustration on page 3).

**YELLOW TRANSPARENT.** Season, July. One of the most valuable early Apples. Fruit medium, smooth, transparent skin; clear white, becoming pale yellow when fully ripe; flesh white, tender, fine grained, of splendid quality. Tree is moderately vigorous, and a good annual bearer. One of the few sorts that do well even on poor thin land.

### Mid-Summer and Fall Varieties



**Yellow Transparent Apples.**

## APPLES—Continued

### Winter Varieties

**BEN DAVIS.** Season, January to April. Vies with Baldwin as a profitable commercial variety in many sections; quality not so good, but a better bearer and keeper. Tree very vigorous and hardy in the Central States. Fruit large, handsome, brightly striped with red; flesh medium quality.

**GANO.** This variety is supposed to be a cross between Ben Davis and Jonathan. It resembles Ben Davis very closely both in tree and fruit, except the color, in which the red is evenly overspread and shows no inclination to be striped. In hardiness, keeping qualities and season it is very similar to Ben Davis. This variety is preferred by some commercial growers on account of its better color.

**HUNTSMAN'S FAVORITE.** Originated in Johnson County, Missouri; very large, golden yellow, with bright red cheek; nearly sweet, fine flavor, very aromatic; one of the best and highest selling market Apples. Tree very healthy and moderately productive; vigorous. November to January.

**MAMMOTH BLACK TWIG.** Excels Winesap in nearly every important point; a better grower, hardier and the fruit much larger; color a darker red; flesh firmer; flavor milder, but fully equal. A long keeper.

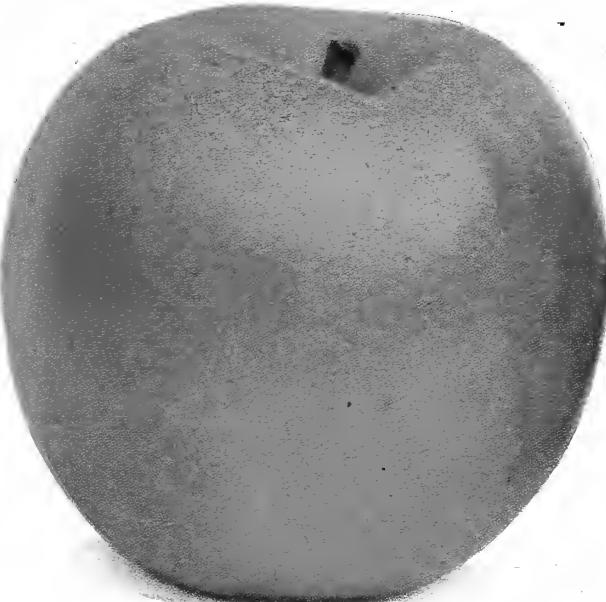
**GRIMES GOLDEN.** An Apple of the highest quality. It is one of the fancy dessert Apples and ranks with Delicious and Jonathan on the markets. Medium to large; bright yellow with pink cheek; flesh fine grained, juicy, with a very pleasant spicy flavor. Like Jonathan, it is equally adapted to almost all culinary uses as well as for eating out of hand. For pies, marmalade, sauce and dumplings, it is one of the best. It has hardly enough acid for the best jelly Apple. The tree is hardy, grows upright and is quite disease and insect resistant. Season of fruit, November to January.



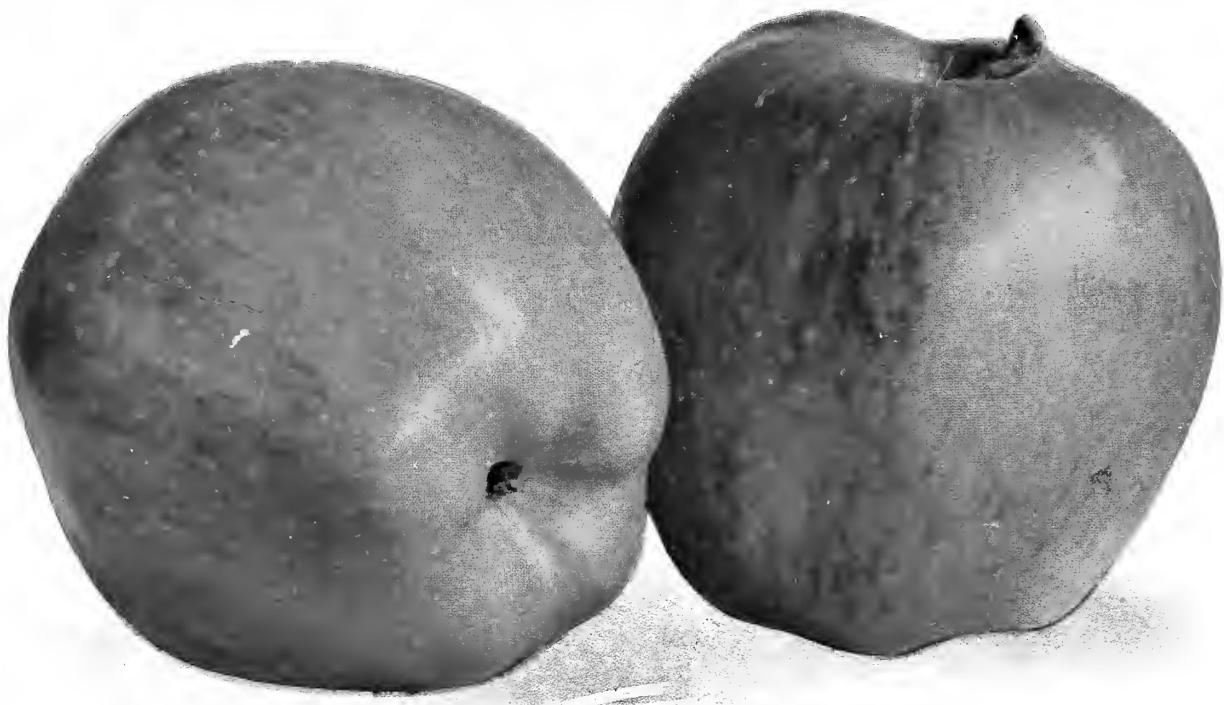
Wealthy Apple.

**McINTOSH RED.** Season, December and January. A choice variety of the Fameuse type. Tree vigorous with spreading head; a good annual bearer. Fruit above medium to large, highly perfumed; smooth, polished yellow, almost covered with brilliant solid crimson, a beautiful fruit; flesh snow-white, crisp, very tender, sprightly, aromatic, sub-acid, very good quality.

**NORTHWESTERN GREENING.** Season, December to March. Tree a splendid vigorous grower, quite hardy. Fruit large to very large; green, becoming yellowish green when ripe; flesh yellow, fine grained and firm; flavor a good sub-acid; very smooth and attractive. One of the best growers we have in the nursery, and in the orchard is very prolific and bears regularly when mature.



Grimes Golden Apples.

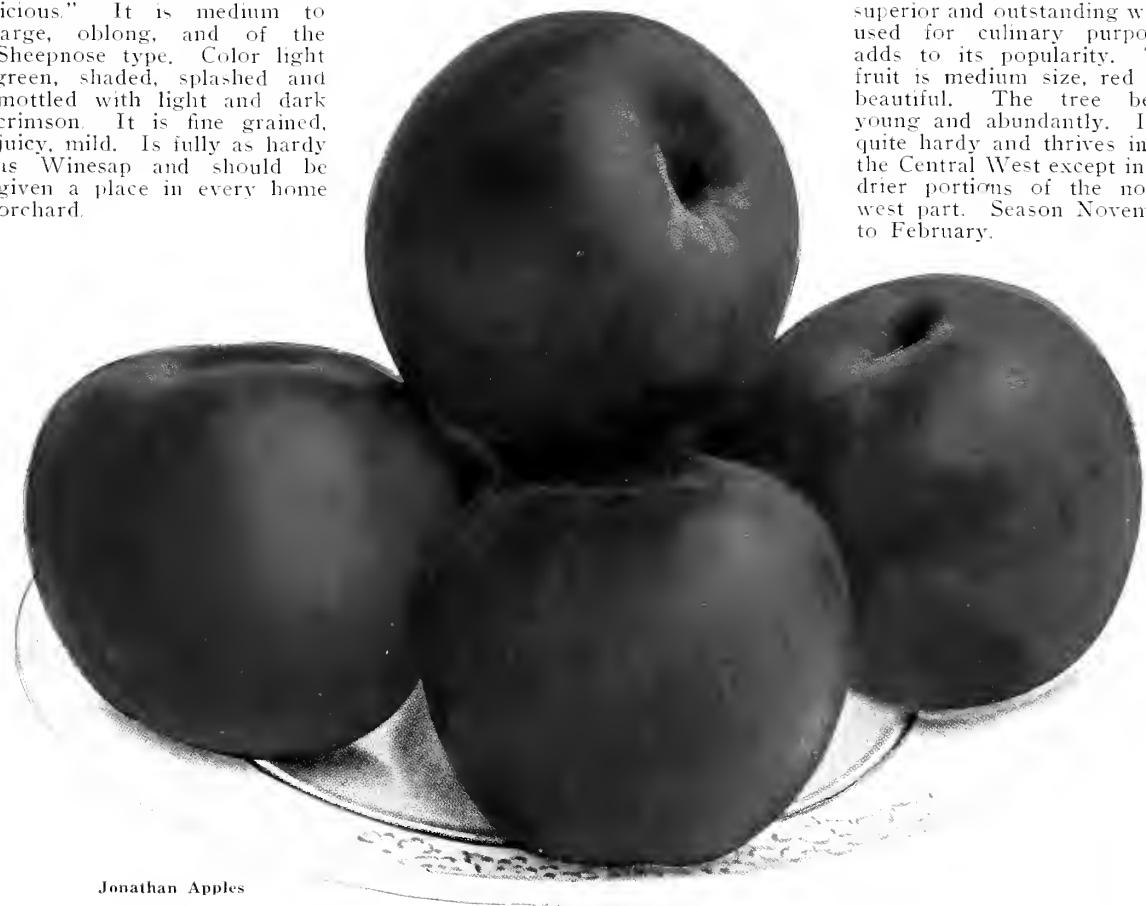


Delicious Apples.

## WINTER APPLES—Continued

**DELICIOUS.** This variety is one of the most popular if not the most popular dessert or eating Apple on the market. It is fully as good as its name implies—it is truly "Delicious." It is medium to large, oblong, and of the Sheepnose type. Color light green, shaded, splashed and mottled with light and dark crimson. It is fine grained, juicy, mild. Is fully as hardy as Winesap and should be given a place in every home orchard.

**JONATHAN.** Recognized on all markets of the country as one of the best among the few leaders of high quality eating Apples. The fact that its qualities and flavor are also superior and outstanding when used for culinary purposes, adds to its popularity. The fruit is medium size, red and beautiful. The tree bears young and abundantly. It is quite hardy and thrives in all the Central West except in the drier portions of the northwest part. Season November to February.



Jonathan Apples

## WINTER APPLES Continued

**RALLS** (Rawles Genet, Geneton). Medium; has mixed and striped crimson on yellow and green; flavor is mild, vinous and refreshing. Popular as a home fruit. The blossoms appear later than any other sort, and thus they sometimes escape Spring frosts. February to April.

**ROME BEAUTY.** Large, roundish, very slightly conical; mostly covered with bright red on pale yellow ground; flesh tender, not fine grained, juicy, of good quality. The large size and beautiful appearance of this Ohio Apple render it popular as an orchard variety. Attains highest perfection on medium soils --land neither too rich nor too poor.

**STAYMAN'S WINESAP.** Most profitable market variety. Originated in Kansas and especially adapted to it. It has large size, bright red color, great productiveness and best quality to commend it. The tree is a vigorous grower, is irregular and drooping in habit, and adapts itself readily to different soils and situations. Drought resisting. Season, November to February.

**WINESAP.** Medium size, dark red, juicy, mild. A favorite late Winter Apple and a leading commercial variety on all markets, as well as a very popular home Apple in the West. Should be planted liberally both in commercial and home orchards south of Dakota-Nebraska state line and east of the 100th principal meridian. Is a high class dessert Apple; also good to very good for sauce, pies, jelly and marmalade. December to April.



Stayman's Winesap Apple.



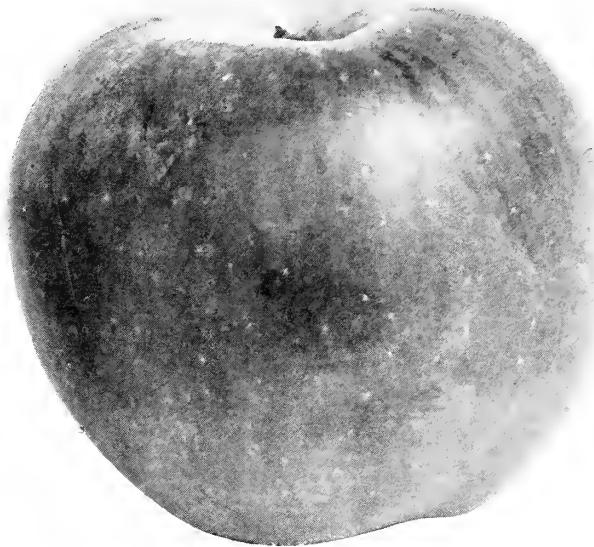
Winesap Apples.

**WINTER BANANA.** Fine, vigorous grower, large, healthy foliage; early bearer. Fruit medium to large, smooth and handsome, golden yellow usually shaded with red blush; flesh fine grained, rich, sub-acid, aromatic; highest quality. One of the best dessert Apples. A valuable market variety, but bruises easily and is not adapted to long distance shipping.

**WOLF RIVER.** One of the largest Apples grown. Color yellowish green with stripes and splashes of carmine, very handsome and showy; flesh nearly white, firm and rather coarse grained; flavor sub-acid, fair to good. Tree vigorous and fairly productive. October to January.

## WINTER APPLES—Con.

**YORK IMPERIAL.** Medium, oblong, angular, oblique, smooth; yellow shaded red, indistinct red stripes; flesh yellow, firm, juicy, sub-acid, good. Winter. An excellent shipping Apple.



York Imperial Apple.



Transcendent Crab Apples.

**TRANSCENDENT.** Fruit medium to large; color brownish yellow with blush of carmine; flesh firm and crisp, yellowish, fine grained, very juicy, acid. Tree is a vigorous grower. Hardy. Subject to blight and should not be planted near other orchard trees. Season August to September.

**WHITNEY.** Season August. Fruit large to very large for a hybrid; yellow, striped with red and mostly covered with red on sunny side; flesh yellow, very juicy and fine grained; flavor rich and almost sweet.



Whitney Crab Apples.

# Pears

THE Pear very justly ranks as one of the most delicious of fruits, by reason of its fine, juicy texture and exquisite flavor and aroma. Of late years much attention has been given to its culture, and those who have intelligently cultivated it for market have found it to be a profitable occupation.

The soil most congenial to this fruit is a strong clay loam, but will succeed in any good soil, provided it is moderately rich and dry. A soil saturated with stagnant moisture for a large portion of the year is totally unfit for this purpose. The usual distance for planting is about twenty-five feet each way, but if the soil is very strong, twenty feet is sufficient.

Pears should be picked ten days before fully ripe and allowed to ripen in the house. This greatly improves the flavor of all kinds, while some are nearly worthless if allowed to ripen on the tree.

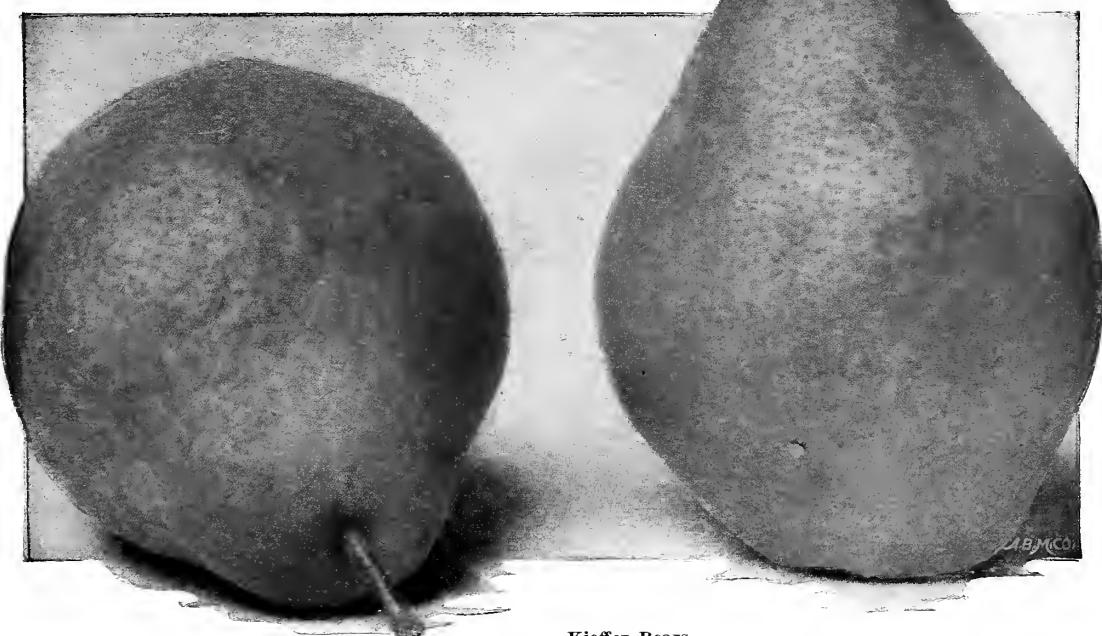
**ANJOU** (Beurre d'Anjou). A large fine Pear, buttery and melting with sprightly flavor; tree a fine grower and very productive; one of the best. September to December.

**CLAPP'S FAVORITE**. A large fine Pear resembling the Bartlett, but without its musky flavor; pale lemon-yellow with brown dots, and fine texture, melting, buttery, juicy with a delicate flavor; tree hardy and productive. August and September.

**KIEFFER**. Large, rich golden yellow, sometimes tinted red on the sun-exposed side; fair quality. It has become a profitable market variety on account of its good shipping and keeping qualities. To properly ripen should remain on the trees until leaves begin to fall, then gather carefully and allow to ripen in a cool dark cellar, or other place of even temperature. Tree a most vigorous grower, an early bearer; one of the most resistant to blight, very prolific, and widely planted throughout the country.



Clapp's Favorite Pear.



Kieffer Pears.

## PEARS—Continued

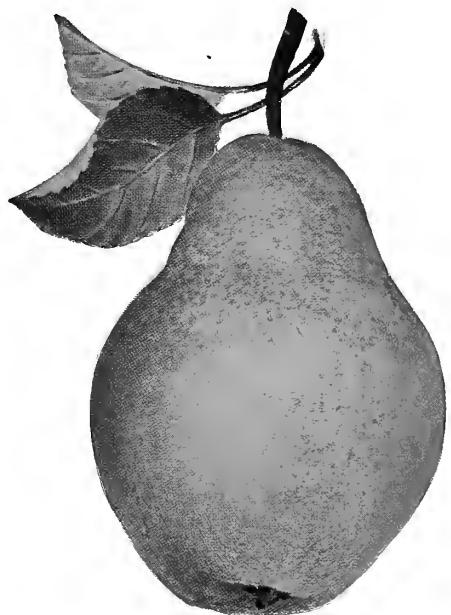
**FLEMISH BEAUTY.** Large, juicy, melting and rich; strong grower and good bearer; very hardy but prefers sunny situation. September and October.

**GARBER.** Large, bright yellow with red, juicy and good; a splendid canning Pear; tree vigorous and hardy, not subject to blight; ripens just after Bartlett.

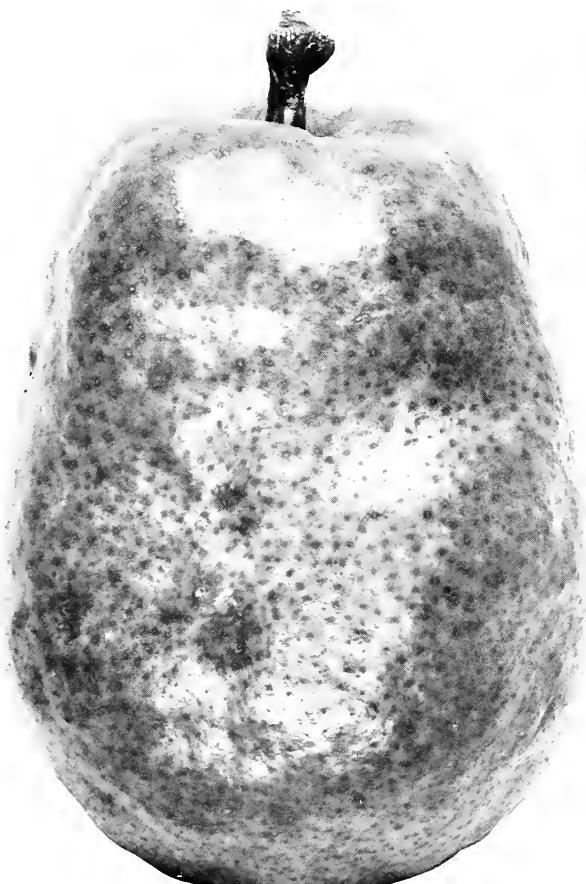
**SECKEL.** A beautiful and delicious little Pear that is the standard of excellence in its class. One of the richest and highest flavored Pears known, always in demand for desserts and luncheons and better known than any Pear of its class. The tree makes a somewhat slow but stout and erect growth. Owing to its extreme hardiness it can be planted in cold climates with assurance of best results. September and October.

**DUCHESS D'ANGOULEME.** Very large, greenish yellow, sometimes russeted; makes a beautiful tree and heavy bearer; buttery, melting and sweet. A dependable cropper and good market sort. October and November.

**BARTLETT.** Large, coloring when fully ripe to waxen yellow with red blush; juicy, melting, highly flavored; a most delicious fruit; tree bears early and abundantly. The fruit ripens just at a time when there is but little competition; in fact, there is no Pear ripening at the same time that is in the Bartlett class. August and September.



Seckel Pear.



Duchess Pear.



Bartlett Pear.

# Cherries

HERE are few more desirable fruits than the Cherry. They are being planted more and more each year and there is always a brisk demand on the market for good fruit.

Cherries thrive in most any dry or well drained soil. The fruit is delicious whether eaten out of hand or preserved. No home garden is complete without a few Cherry trees.

Cherries should be planted twenty feet apart. The soil best adapted to the Cherry is a light loam on a gravelly or sandy sub-soil, though it will do well in almost any situation not too wet. To insure a good growth, Cherries should be well cut back for several successive seasons.

**EARLY RICHMOND.** One of the most valuable and popular Cherries, unsurpassed for cooking purposes. It is the good old variety that yields such marvelous crops in the gardens. The most hardy of all varieties, uninjured by the coldest Winters. Tree slender in growth, with a roundish spreading head, exceedingly productive. Ripens through June. The Cherry tree bears almost every year, and is an easy fruiter. June.

**DYEHOUSE.** A hardy and valuable Cherry. Unquestionably the earliest, ten days earlier than Richmond, fine quality, its early bearing remarkable as its great hardiness. Has the appearance of being covered with a scarlet cloth such is the abundance of the fruit. Has the smallest pit of any Cherry known; a splendid keeper and free from knots. For tarts, pies and especially for canning, it has no superiors among Cherries. June.

**WRAGG.** Large, roundish, heart-shaped, dark crimson and when fully ripe, black or nearly so; flesh and juice light crimson, firm and good, very productive; one of the hardiest and is usually a sure cropper. July.



Compass Cherry-Plums.



Early Richmond Cherries.

## Compass Cherry-Plum

This hardy northern fruit was originated in Minnesota and is a cross between the Sand Cherry of the plains and native Wild Plum. It will grow and thrive where extreme cold and semi-arid conditions prevail. It usually bears the second year from graft and often nursery trees are loaded down. The quality is much better than that of the Sand Cherry, having lost much of the astringency of this parent in hybridization. The flesh is more firm than that of most native plums, making it valuable for preserving. It is also prized by many to eat from the hand. Every home, especially in the North and West, should have some of these trees. They will abundantly bear fruit that will be thoroughly appreciated.



Montmorency, the Largest and Best Sour Cherry.

## CHERRIES—Continued

**LARGE MONTMORENCY.** This is the best of all the sour varieties of Cherries. There is a greater demand on the market for this Cherry than for any other. The trees are the cleanest and best growers and are less subject to disease, less affected by wet weather, and are the best bearers of the best fruit of all the other sour varieties. No matter how unfavorable the season may be, Montmorency can be depended upon for a full crop. The Montmorency is a good shipper, very attractive looking and always brings

good prices. The canning factories are always calling for them and want them by the hundreds of tons. The fruit is good sized, fine flavored and bright, clear red. Fruit ripens 10 days after Early Richmond.

**ENGLISH MORELLO.** Fruit large, elongated; almost blackish red when fully ripe; very rich, acid; juicy and good. A splendid pie Cherry. Tree very hardy, somewhat smaller than other sorts but exceedingly productive. This fruit is in great demand by the fruit-juice manufacturers. July.



English Morello Cherries.

# Peaches

**F**EW fruits enjoy a greater popularity than Peaches. With delicious flavor they combine attractive appearance, and the uses to which this fruit may be put are so many that there are never enough on hand for all. This applies especially to small communities in which farmers and fruit growers can establish a thriving business without serious effort.

Peaches do well in most soils and by selecting varieties which bear early and late the Peach season may be extended over a considerable period.

For the commercial grower, Peaches produce fortunes, and a well cared for Peach orchard is a veritable mint for coining money.

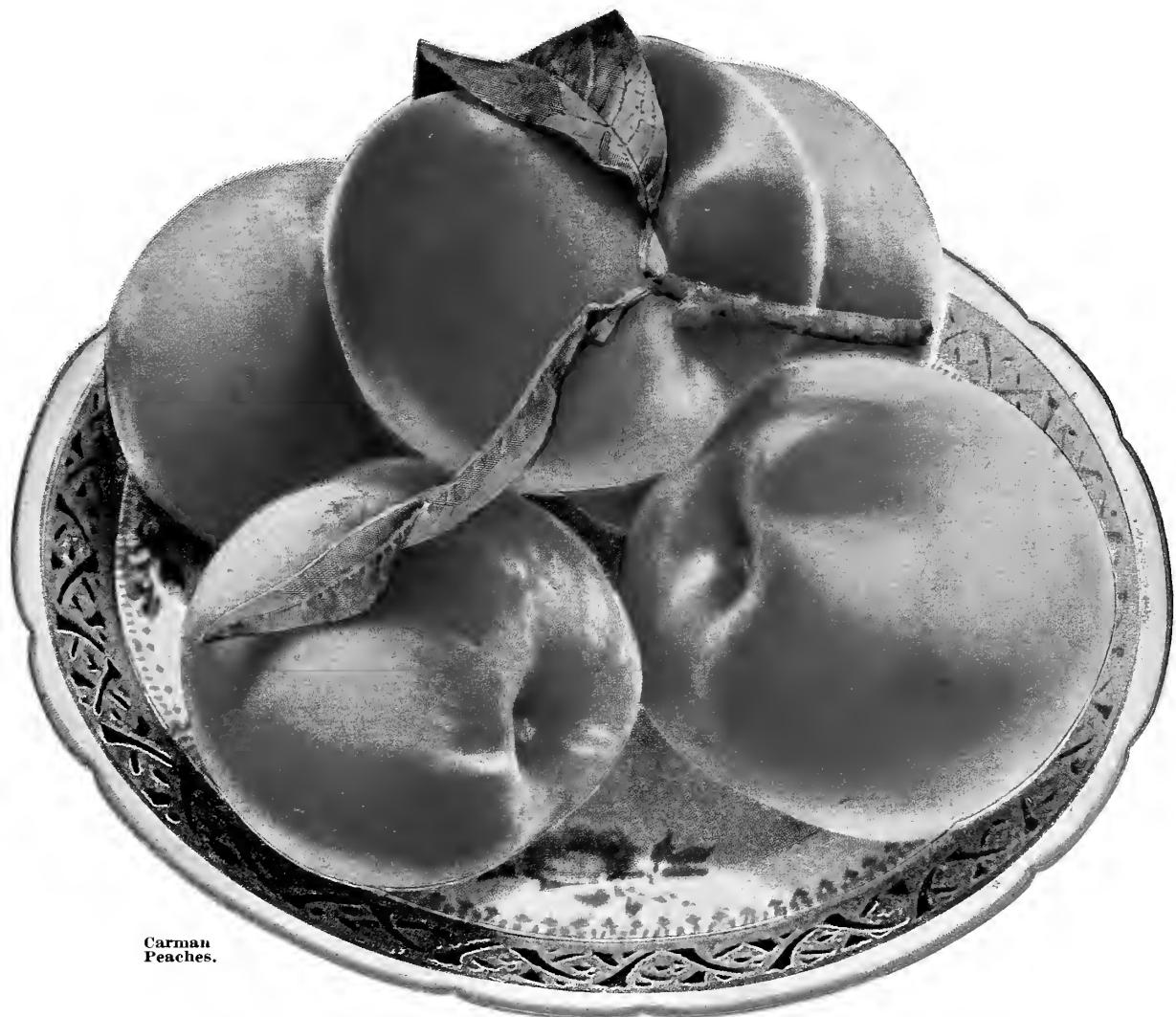
**BELLE OF GEORGIA.** Fruit large size; color red and white; flesh white, firm and highly flavored. This variety has become one of the standard varieties in the big commercial orchards, both North and South. Stands shipping well and brings top prices. In many respects it is equal to Elberta. Tree a rapid grower and very productive. Perfect free-stone. Last of August.

**CRAWFORD'S EARLY** (Free). Large, roundish, bright yellow with red cheek; flesh yellow, juicy and sweet; quality good. First of August.

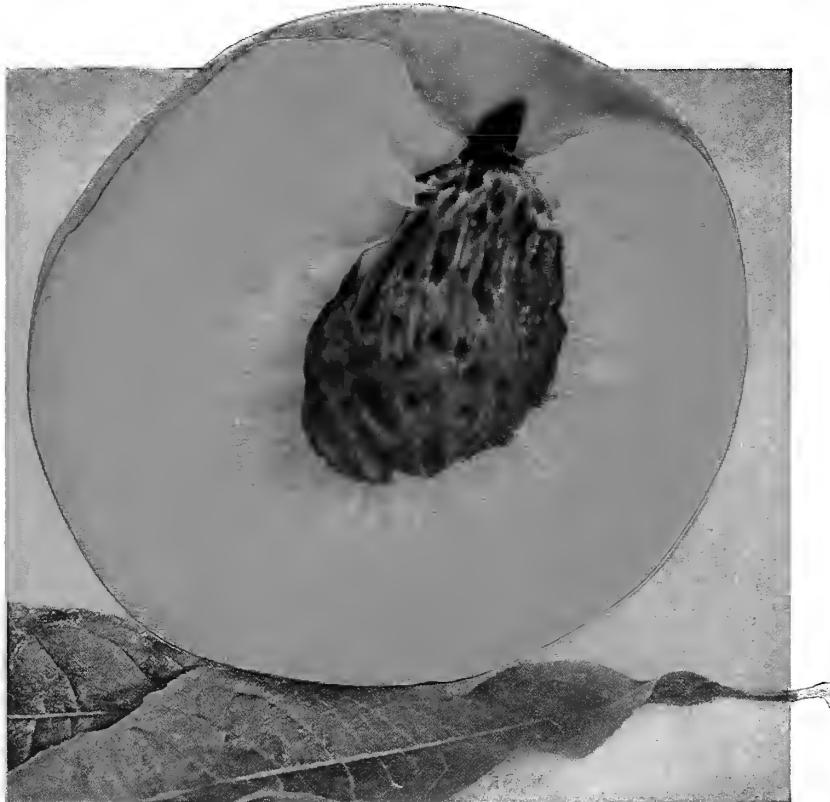
**CHINESE CLING.** A large, creamy white Peach, finely shaped and marbled with red cheek, flesh yellow, firm and of good quality. August.

**CROSBY** (Free). Medium to large, orange-yellow splashed with red; flesh yellow, red at pit, juicy and rich; tree hardy and prolific; fruit should be thinned in order to make good sized Peaches; a popular market sort. August.

**CARMAN** (Free). Fruit large, color creamy white or pale yellow with deep blush; flesh tender, fine flavor and quite juicy; very hardy and productive every year. This is a favorite variety with many growers, as it is one of the most profitable varieties ever introduced. The fruit stands shipping so well that it always reaches market in prime condition, and its handsome appearance causes it to bring the highest prices. Middle of July.



Carman Peaches.



Elberta Peach.

## PEACHES—Con.

**ENGEL'S MAMMOTH** (Free). A very fine large market sort, resembling Late Crawford, but more productive. Very profitable wherever grown. August.

**EARLY WHEELER** (Cling). Here is the best of all early Peaches. The tree is hardy, vigorous and very productive. The fruit is of good size and of very showy appearance, being an attractive creamy white, splashed or blushed with red. Flesh white, firm, meaty and of good flavor. The skin is tough and quite fuzzy, making it a fruit that will stand shipping. As a home fruit it is one of the best and is a leading early market Peach. First of July.

**FITZGERALD** (Free). An improved Crawford's Early, fully equal to it in size, quality and color; tree makes a thrifty growth, bears quite young, is productive and very hardy; bright yellow splashed with red; flesh deep yellow and of the best quality. August.

**FOSTER** (Free). Larger than Crawford's Early which it resembles in general appearance. Deep orange-red, becoming quite dark on sunny side; flesh yellow, rich and juicy with sub-acid flavor; firm. One of the best for drying or canning. Middle of July.

**ELBERTA** (Free). The great market Peach of the Southwest; perfectly hardy in the North and is believed by many growers to be the best all around Peach; color lemon-yellow with blush on sunny side; flesh pale yellow, tender and juicy; tree vigorous; a good shipping Peach. Middle of August.

**CRAWFORD'S LATE** (Free). Large, roundish oval, yellow with broad red cheeks, flesh yellow with red at the pit; melting, vinous and very good. Last of August.



Crawford's Late Peaches.



Champion Peaches.

**PEACHES—Continued.**

**CHAMPION** (Free). Large, round, quite regular; yellowish white mottled with red on sunny side; flesh white with red at the pit; one of the best in quality and a general favorite of great hardiness. Ripens about August 10th.

**GREENSBORO** (Semi-cling). Large, rather roundish; yellow with splashes of bright red; highly colored in the sun; flesh white, very juicy and of good quality; ripens with Alexander. Fruit is not as apt to rot as many other early sorts. Hardy. Middle of July.

**J. H. HALE** (Free). Very large, globular. Color deep golden yellow overlaid with bright carmine. Flesh solid, deep yellow, delicious flavor. Tree very hardy and productive, similar in growth to Elberta type. An exceptionally fine variety. Ripens a few days before Elberta.



J. H. Hale Peach.



Heath Cling Peach.

**HEATH CLING** (Cling). Very large, creamy white with delicate red blush; flesh white, slightly red at the pit; tender, juicy and sweet; a valuable sort for canning and one that commands fancy prices in all markets. Late September.

**MAYFLOWER** (Semi-cling). Earliest Peach known. Ripens one week before Sneed; dark red all over, beautiful appearance. Carries well to market, not being tender like Sneed. Blooms very late, crop never entirely cut off by late frosts. Size medium, quality good. Tree an upright, good grower; a very prolific bearer. First Peach to ripen.

**TRIUMPH** (Free). Medium to large, round, somewhat flattened; greenish yellow, broken striped with purplish red and pink dots; flesh yellow with red stains, juicy, luscious and very good. One of the early sorts. Early July.

**WONDERFUL** (Free). Large Peach, uniform in size and shape. Rich golden yellow color nearly covered with bright crimson. October.

#### PEACHES—Continued.

**STUMP** (Free). Medium to large, roundish oval, creamy white with bright red cheek and abundant bloom; flesh white, very good. September.

**SALWAY** (Free). Large, roundish ovate, yellow, with a crimson cheek; flesh deep yellow, red at the pit; sweet, juicy, good. Valued as one of the best late Peaches for market. First of October.

**ROCHESTER** (Free). Large, yellow and red Peach. Flesh yellow, of fine quality and exquisite flavor. Stone very small and will ship as well as Elberta. The tree comes into bearing when very young, is a strong, upright grower and is as hardy as an oak. Has produced a full crop after undergoing a temperature of 16 degrees below zero, which killed all the buds on Elberta and Crawford in the same orchard. Early August.



Rochester Peach.



Lombard Plums.

## Plums

THE Plum, like the pear and other finer fruits, succeeds best in heavy soil with some clay, and being almost entirely free from disease, they can be grown very profitably. Of late years the demand for Plums has increased very rapidly. The finer kinds are excellent dessert fruits, of rich and luscious flavor; for cooking and canning they are unsurpassed. For home consumption they should be gathered a few days earlier. Some of the varieties are inclined to overbear and should be thinned in order to produce perfect fruit. Most all the varieties, especially the native sorts, are extremely hardy and resist the most severe weather. Plums should be planted 18 feet apart in rich soil, which should be kept well cultivated.

**LOMBARD.** Medium, roundish oval, violet-red, juicy and pleasant; adheres to stone, valuable market sort, hardy and adapted to light soils; a reasonably sure cropper.

**BRADSHAW.** Very large, dark violet-red; flesh yellowish green; juicy and pleasant; tree vigorous, erect and productive. August.

**DAMSON.** Deep purple fruits of delicious quality. One of the best for marketing as it stands handling well. Tree vigorous, hardy and resists disease in a remarkable fashion.

**SHIPPER'S PRIDE.** Large, nearly round, dark purple, juicy and sweet; splendid shipper and good market variety; tree moderate grower, but productive.

**REINE CLAUDE (Green Gage).** Fruit of golden yellow color, large in size and unsurpassed in flavor and quality. Tree is moderately large; productive.

**WANETA.** This magnificent Plum, originated by Prof. N. E. Hansen, gives to northern fruit growers an opportunity to compete with California in the production of large, finely flavored and colored Plums for market. The tree is a very fast grower, producing the largest and what is believed to be the best of the Hansen Hybrids. That means that it is the best in tree and in fruitfulness of any Plum grown at this time in this part of the country. The fruit of Waneta often is as much as two inches in diameter; bright red in color; of delicious quality; a long keeper and splendid shipper.

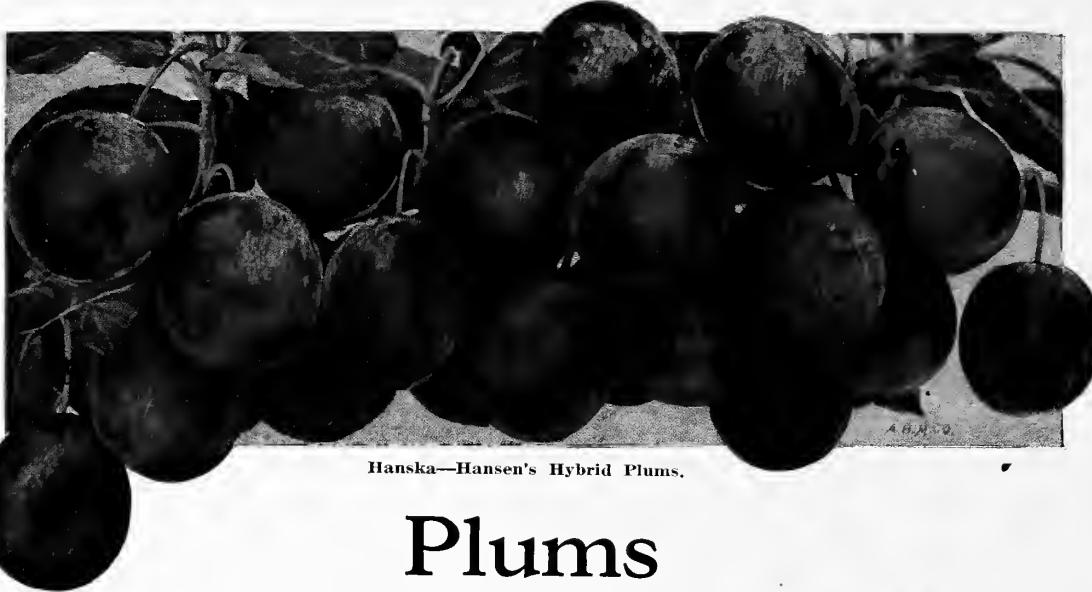
**WILD GOOSE.** The most popular fruit with some fruit growers. Tree a vigorous, upright grower; fruit medium to large, rich golden yellow, shaded with red; flesh yellow and juicy; flavor rich and good.

**ABUNDANCE.** One of the best Japan Plums. Tree is very rapid grower, healthy and comes into bearing quite young and yields abundantly; medium size, rich, bright cherry-red with distinct bloom and highly perfumed; flesh light yellow, juicy and tender, and excellent quality. Tree vigorous and hardy.

**BURBANK.** Is decidedly the best of Japan varieties; unsurpassed for beauty and productiveness, as well as a very hardy tree. One of the grand points about the Burbank is that it succeeds over a wide range of our country, and will stand the most severe Winters. Fruit large, oval, with reddish purple skin; flesh yellow, juicy and good.



Burbank Plums.



Hanska—Hansen's Hybrid Plums.

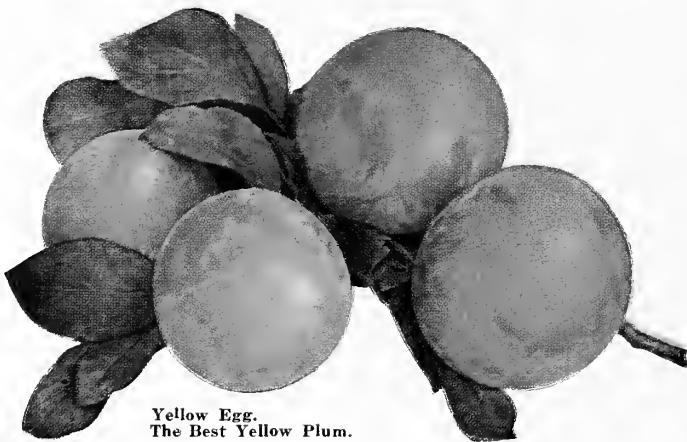
## Plums

**HANSKA.** This is a cross between the native Plum and the fine fragrant Apricot Plum of China. The fruit is splendid for eating out of the hand, and when cooked retains the Apricot flavor. The size of the fruit is about one and one-half inches in diameter. The color of the fruit when ripe is bright red, with a heavy blue bloom; flesh is firm, yellow, good quality and very fragrant. It begins to bear the second year, ripens in August. Its value for preserves will make it popular and desirable everywhere.

**OPATA.** This variety is a cross between the Sand Cherry and the Gold Plum. The fruit is one inch or more in diameter; small pit. It is a dark purplish red, with blue bloom, flesh is green and firm; flavor pleasant, partakes of the rich sweetness of the Gold Plum. It is excellent for eating out of the hand as well as for table and cooking purposes. Bears as early as the first week in August. This is greatly in its favor, as at that season there is very little fruit of any kind. Tree hardy and a great bearer, making it popular wherever planted.

**YELLOW EGG.** Very large and beautiful egg-shaped yellow Plum; a little coarse but excellent for cooking; tree a free grower and very productive; late August.

**GERMAN PRUNE.** A valuable Plum of fair quality for dessert, but most esteemed for drying and preserving. Large, long-oval, purple, with a thick blue bloom; flesh firm, sweet and pleasant, separating from the stone. Moderate to vigorous in growth. September.



Yellow Egg.  
The Best Yellow Plum.



German  
Prune

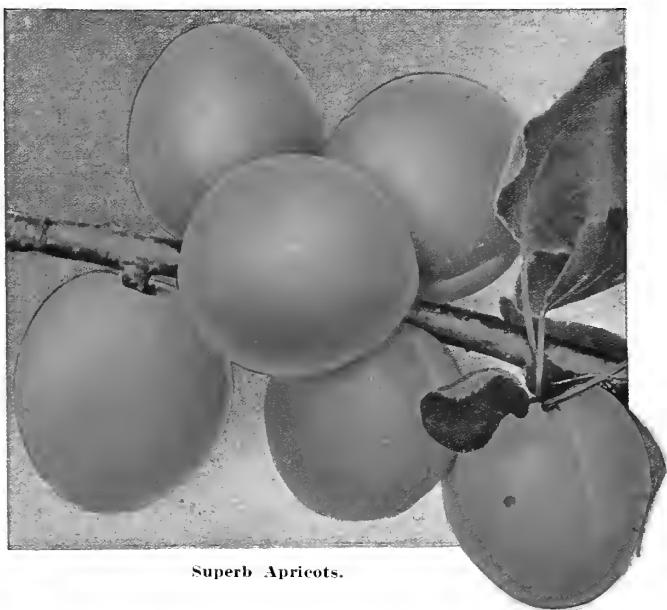
**SAPA.** Introduced in 1908. Fruit has a glossy, dark purple, thin skin, rich dark purple red flesh of the Sultan Plum. On account of its fine flavor and rich coloring, Sapa has headed the list of these Hybrids in popularity. Excellent for eating out of the hand, and makes the most delicious, rich, sweet, deep wine colored sauce. It is a wonderfully early and prolific bearer. Specimens grown in Minnesota on one-year-old trees in the year 1909 took first prize as a seedling Plum at the Minnesota State Fair for that year. Fruits are borne in clusters around the branches, and three-year-old trees have borne as high as one and one-half bushels. Tree is spreading and handsome in appearance.

## PLUMS—Continued

**WICKSON.** This, largest of the Japan Plums, is superb in every way. Its color is bright cherry-red, covered with bluish bloom; the pit is small for so large a Plum. The flesh is thick, sweet, tender and juicy, indicating good keeping and canning qualities.

## Apricots

**SUPERB.** Without question the best Apricot now being offered. Originated in Kansas and especially adapted to it and adjoining territory. Its points of excellence are in the magnificent tree, which is large and spreading, with broad, glossy leaves. It is perfectly hardy, and in productiveness has no superior. In quality it is better than Early Golden. Color a beautiful yellow with slight blush; flesh firm and solid. One of its many desirable traits is its long season, covering a period of three weeks.



Superb Apricots.

**MOORPARK.** One of the largest; orange-yellow with numerous specks and dots; flesh yellow, sweet, juicy and rich; tree is somewhat tender and is inclined to ripen unevenly. August.

**ROYAL.** Large, roundish oval; pale orange with faintly tinged red cheek; flesh yellow, firm, sweet, high flavored, slightly sub-acid and good quality, ripens a week earlier than Moorpark; a good market variety.



Champion Quince.

## Quinces

The Quince is attracting a good deal of attention as a market fruit. The tree is hardy and compact in growth and requires little space; is productive, bears regular crops and comes into bearing early; the fruit is much sought for canning. When put up in the proportion of one quart of Quinces to about four quarts of other fruits, it imparts a delicious flavor. It will grow in any good garden soil which should be kept mellow, well enriched; fruit should be thinned out if it bears too freely.

**CHAMPION.** Very large and handsome; flesh cooks as tender as an apple without hard spots; flavor delicate; tree very handsome and bears abundantly. One of the most valuable sorts. Color greenish yellow.

**ORANGE.** Large, roundish, somewhat irregular with a small and short neck at the base; fine golden yellow flesh and of excellent flavor. October.

# Grapes

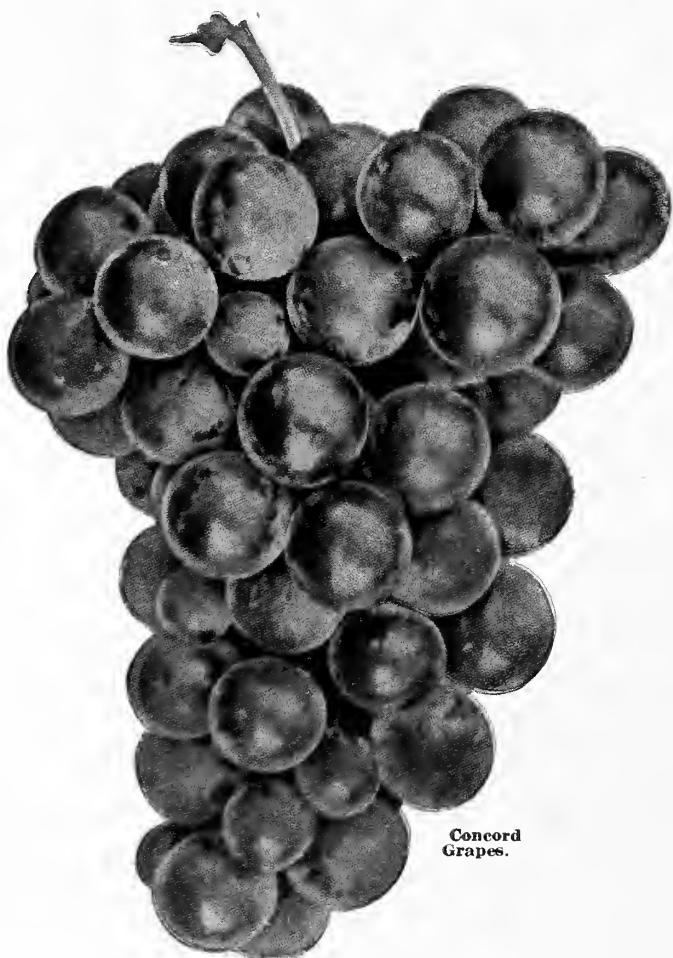
**E**VERYONE should have a few Grape vines in the home garden. They require very little cultivation and the returns are so abundant. If proper selection of varieties is made, one may have Grapes on the table for several months in the year. They can be trained over fences, trellises or doorways and thus be ornamental as well as useful. To grow for market, they can be planted on hillsides that are unsuitable for other crops. They should in all cases have a free exposure to the sun and air.

**BRIGHTON.** Bunch large, shouldered; berries medium to large, round, dark red, tender, very little pulp, sweet, juicy, slightly aromatic and very good. Ripens early.

**CATAWBA.** Bunches medium, shouldered; berries large, deep coppery red, becoming purple when ripe; flesh somewhat pulpy; juicy, sweet, aromatic and rich; one of the latest.



Brighton Grapes.

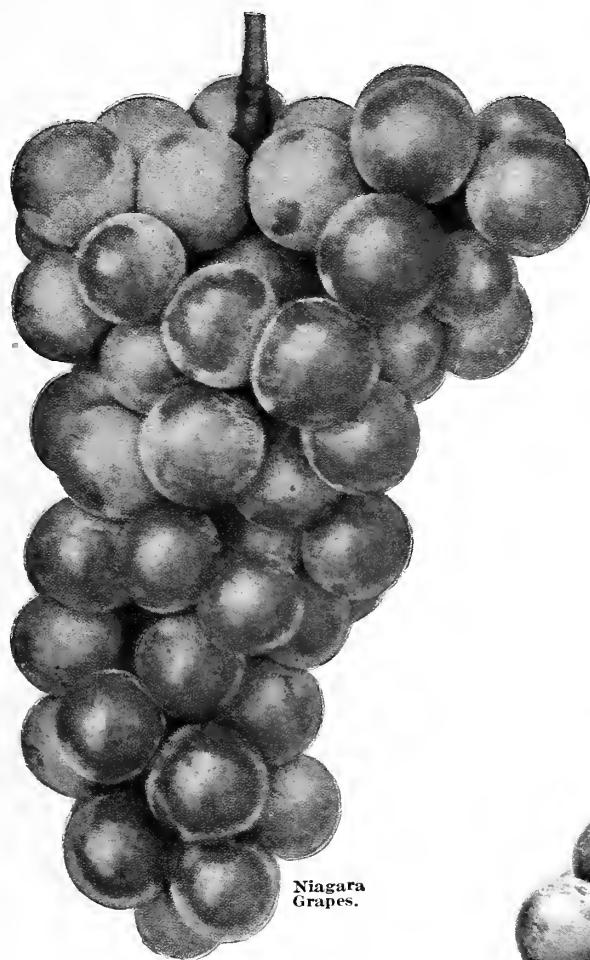


Concord Grapes.

**DELAWARE.** The bunches are small, compact and sometimes shouldered; berries are small with thin but firm skin; flesh juicy, very sweet and refreshing and of the best quality for both table use and for wine. Ripens with Concord or a little before; vine is hardy, productive and a moderate grower.

**CONCORD.** The standard commercial Grape. This grand variety is without exception the most productive and profitable Grape grown. Concord is the standard of quality and comparison on all markets. Buyers everywhere pay a premium for this super-quality Grape. Concord is perfectly hardy, very productive and adaptable to all soils. The bunches are large and compact. Berries large, bluish black color, sweet and juicy; fine quality and flavor. This variety is the one all-purpose Grape. A strong, healthy grower, exceedingly productive, makes plenty of vine, the foliage is tough and leathery, resistant to diseases and insects. We recommend Concord to our most exacting customers.

## GRAPES—Con.



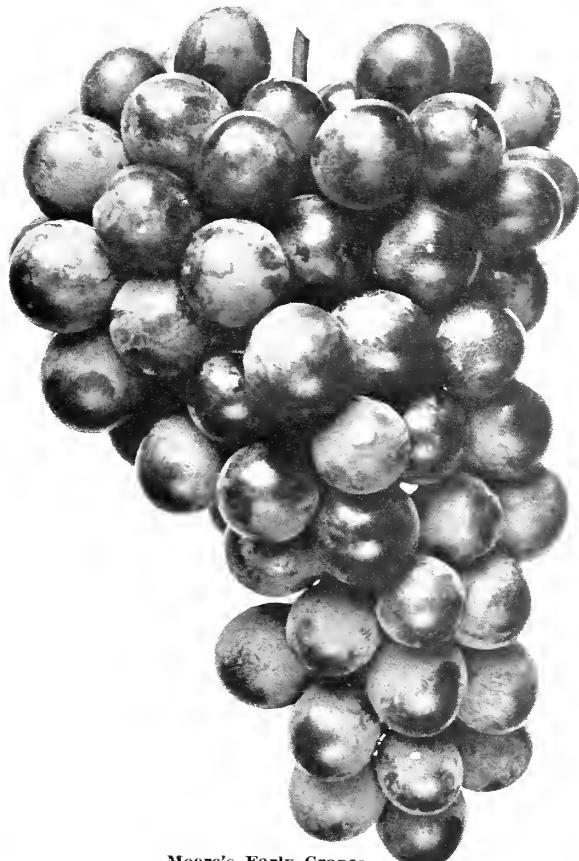
Niagara  
Grapes.

**WORDEN.** Seedling of the Concord, which it greatly resembles in appearance and flavor, but the berries are larger. The fruit is said to be better flavored and to ripen several days earlier. These qualities will give it the foremost rank among native Grapes.

**MOORE'S EARLY.** A large Grape, ripening a week earlier than Concord; good grower; berries large, good quality, and makes a moderate yield; very valuable as an early Grape.

**NIAGARA.** Occupies the same position among the white varieties as Concord among the black. Bunch and berries large, greenish white, changing to pale yellow when fully ripe. Skin thin but tough, quality much like the Concord.

**CAMPBELL'S EARLY.** A new, very large and fine early black Grape; strong, vigorous, hardy vine with thick, healthy leaves; clusters very large, usually shouldered, compact and handsome; berries large, nearly round, black, rich, sweet, very good; skin thin; seeds few and small, parting easily from the pulp; a good shipper. Ripens very early, but remains sound on the vines for many weeks. This makes it one of the most satisfactory and profitable market sorts to grow.



Moore's Early Grapes.

# Currants

**CHERRY.** The largest of all red Currants; berries sometimes more than one-half inch in diameter; bunches short; plant very vigorous and productive when grown on good soil and well cultivated.

**FAY'S PROLIFIC.** For size, beauty and productiveness it is a remarkable red Currant. The berry is equal to Cherry Currant, while the flavor is superior. The stem is long, which permits rapid picking, valuable for both market and home. Fruit hangs on well, never dropping, as in other Currants.

**PERFECTION.** Bright red, and of a size larger than the Fay; size of berries is maintained to end of bunch. It is one of the most productive Currants. Rich, mild, sub-acid flavor and having plenty of pulp with few seeds. You can pick Perfections as fast as cherries.

**WILDER.** Very large; bright red and attractive; a splendid sort; not so acid as most. Bush very productive; large bunches; ripens rather early, fruit keeps well.

**WHITE GRAPE.** Very large, yellowish white; sweet, or very mild acid; excellent for the table. The finest of the white sorts; very productive.



Perfection Currants.

# Gooseberries

**PEARL.** An exceedingly prolific variety that has been well tested and ranks No. 1 in healthfulness and productiveness. Same color as Downing; seems to possess all the good points of that variety. Valuable for home use and market.

**HOUGHTON.** Medium size, pale red, sweet and juicy; vigorous grower, abundant bearer and free from mildew. Considered by many the best paying sort in cultivation.



Downing Gooseberries.

**OREGON CHAMPION.** Berries medium, round, smooth, greenish white with thin transparent skin; good quality and ripens early; bush vigorous and very free from mildew.

**DOWNING** (See illustration). Fruit large, round, light green with distinct veins, soft, juicy and fine flavored; vigorous and productive; smooth skin; one of the best.



Cumberland Raspberries.

## Raspberries

**BLACK PEARL.** Has proven to be the best in this part of Kansas and is largely planted. The berry is large and black. The cane is not as heavy as Cumberland, but healthy. Not an extra strong grower but good. About a week earlier than Cumberland.

**CUMBERLAND (Black).** The largest of all black-caps; healthy, vigorous grower, throwing up stout, well branched canes that produce immense crops of magnificent berries. Fruit very large, firm, quality about the same as Gregg; keeps and ships well as any of the blacks. The most profitable market variety.

**CUTHBERT (Red).** Large, bright scarlet-crimson, excellent quality, firm, juicy and refreshing, vigorous grower, hardy and productive; very popular as a home garden and market berry.

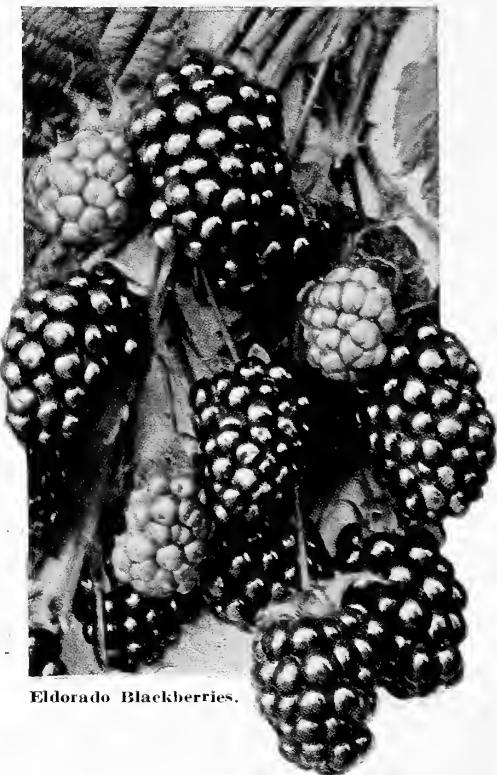
Cuthbert  
Raspberries.



## RASPBERRIES—Con.

**KANSAS** (Black). Large, round, firm, moderately juicy, strong grower and very productive; ripens early; considered one of the best market berries on account of handsome appearance.

**ST. REGIS EVERBEARING** (Red). The new everbearing variety. It gives a crop of fruit all Summer and Autumn fruiting on the old canes in generous quantities until late in August. By this date berries begin to ripen on the young canes and continue until late in Autumn. Berries are a bright crimson, of large size and of surprising quality, sugary with full Raspberry flavor. It succeeds upon all soils, whether light and sandy or cold, heavy clay, and canes are absolutely hardy.



Eldorado Blackberries.

**MERSEREAU.** Remarkably strong grower, upright, producing stout, stocky canes. Claimed to be the hardiest Blackberry, standing uninjured 20 degrees below zero without protection. An enormous producer of extra size berries, which are brilliant black and retain their color under all conditions; extra quality, rich and melting, without core. Unsurpassed as a shipper and keeper. The season is early midsummer.

## Dewberries

The Dewberry is a dwarf and trailing form of the Blackberry. The fruit is highly prized as a market fruit owing to its large size and fine quality. Set the plants two feet apart in the row and cover in Winter with coarse litter. Should be mulched in the Spring to keep them off the ground.

**LUCRETIA.** Perfectly hardy and remarkably productive; said to be the best of this class of fruit; ripens early, is often one and one-half inches long by one inch in diameter; sweet, luscious and melting, this variety is recommended most highly.



St. Regis Raspberries.

## Blackberries

**BLOWERS.** Originated in the celebrated small fruit belt of Chautauqua County, New York, where it has been thoroughly tested for several seasons. Claimed to be the hardiest, most productive, the finest quality, and to bring on the market the highest price of all Blackberries. Large size, jet black, good shipper, best quality and unexcelled productiveness are the main characteristics of this splendid new sort.

**EARLY HARVEST.** One of the earliest, berry medium sized, good quality and very prolific; firm and attractive in appearance. A good market sort.

**ELDORADO.** Vine is vigorous and hardy; berries are very large, black, borne in clusters; ripens well together; sweet, melting and pleasing to the taste.

**ERIE.** One of the best round, large Blackberries; absolutely hardy, very black, firm and solid; ripens early.

**SNYDER.** The hardiest Blackberry known; fruit medium sized and of great quality; a standard market variety.



Early Harvest Blackberries.



Senator  
Dunlap  
Strawberries.

## Strawberries

The varieties listed below, also on page 24, are perfect-flowering sorts and do not require pollination by the planting of other varieties.

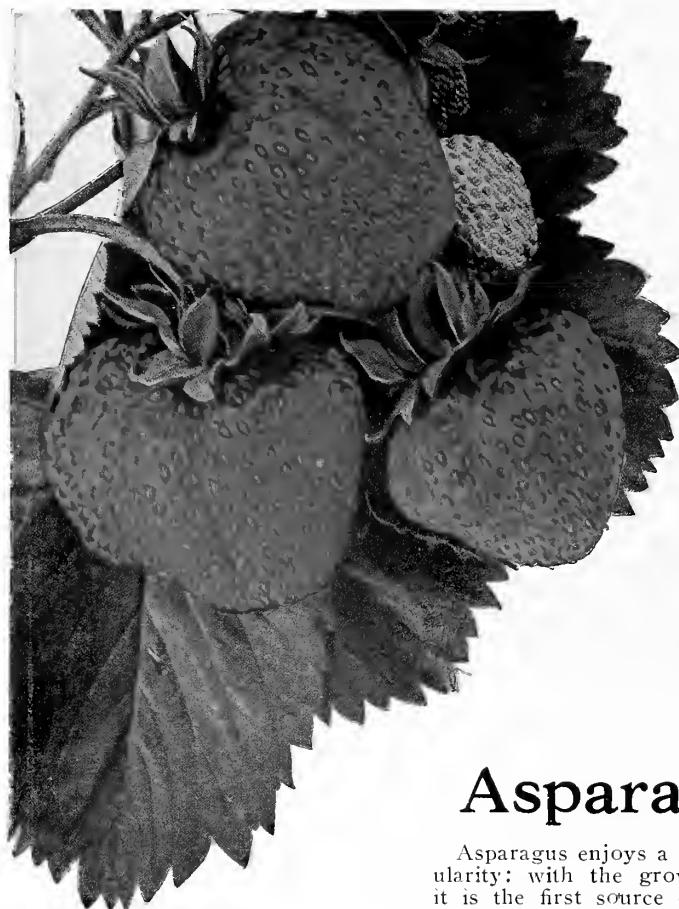
**SENATOR DUNLAP.** This berry is of the Warfield type, has a perfect blossom, is hardy, productive, a splendid keeper and able to hold its own under any "rough and tumble" methods of culture to which it is likely to be subjected. It is a very heavy bearer of good size, even fruit, of a very beautiful dark red color. It is a berry to grow for either home use or market. Early.

**GANDY.** This is one of the most reliable, large late berries that is grown. It is one of the old standard varieties that you can depend upon. It is a strong grower and a good plant maker. The large, handsome appearance of the fruit always command for it a high price in the market. The fruit always grows large and is one of the best shipping varieties grown.

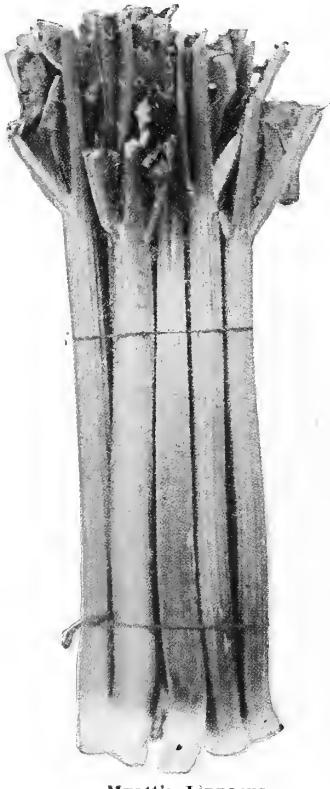
**PROGRESSIVE EVERBEARING.** Progressive Strawberry plants produce phenomenal crops of medium large berries of a beautiful red color which extends through the berry, and of an exquisite flavor. Fruit fine for your table as well as for canning and preserving. When planted in the Spring, Progressive plants yield fruit the same Summer and Fall and then yield a heavy crop the following year, beginning to bear about a week ahead of any of the June varieties. Progressive will do well in any place that Strawberries will grow. Try them.



Progressive  
Everbearing  
Strawberries.



Aroma  
Strawberries.



Myatt's Linnaeus  
Rhubarb.

## STRAWBERRIES Continued

**AROMA.** Large, dark red; uniformly roundish, heart-shaped; flesh firm and of very good quality. Stands shipping well; plants vigorous and very productive; blossoms rich in pollen and is a good fertilizer for imperfect varieties. Late.

**GIBSON.** This is the most popular Strawberry extant today. Best for market and best for the home garden. Berry large; dark glossy red, nearly round, very productive. Plant Gibson and success will be yours. Midseason.



Conover's Colossal Asparagus.

## Asparagus

Asparagus enjoys a twofold popularity: with the grower, because it is the first source of money in the Spring, yielding sure returns until driven out of the market by early peas; and with the consumer, who finds it the earliest near-by vegetable, relished for its delicious flavor and medicinal qualities.

Any soil which will grow good corn or potatoes is excellent for Asparagus. It should lie level, be well drained and free from stones, and in a good state of cultivation. It is best to avoid sod ground in starting a new bed, as the old sods interfere with setting the plants.

**CONOVER'S COLOSSAL.** This variety is much superior in size and quality to any of the old common sorts, being remarkably tender and fine flavored. The large green shoots, one to two inches in diameter, are sent up thickly from the crowns, making it a very profitable variety.

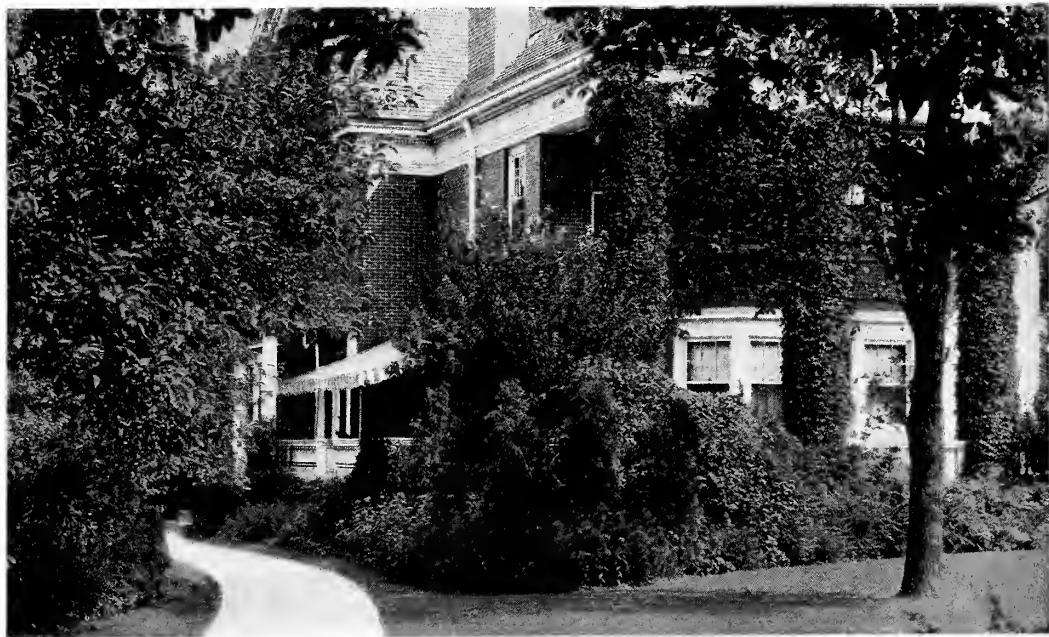
### NUMBER OF PLANTS TO THE ACRE

12 inches by 4 feet .....	10,890
15 inches by 4 feet .....	8,712
18 inches by 4 feet .....	7,260

## Rhubarb or Pieplant

This very desirable vegetable comes early in the Spring. The large stems of the leaves are used for pie making and stewing. It is also valuable for medicinal purposes. A deep, rich soil is indispensable to secure large, heavy stalks. Plant in rows four feet apart, with the plants three feet distant. Set so that the crowns are about one inch below the surface. Top dress in the Fall with stable manure and fork under in the Spring.

**MYATT'S LINNAEUS.** Those who have never grown this variety, which is of superior quality, will hardly recognize the old "pieplant." It is an early, tender variety, without being in the least tough or stringy, with a mild sub-acid flavor.



## ORNAMENTAL DEPARTMENT *Trees*

**AMERICAN WHITE ASH** (*Fraxinus americana*). A well known native tree; tall, very straight, with broad, round head and dense foliage.

**BLACK LOCUST** (*Robinia pseudoacacia*). A native tree of large size, rapid growth, and valuable for timber as well as ornamental; flowers are white or yellowish, very fragrant and appear in June.

**BOX ELDER or ASH-LEAVED MAPLE** (*Acer negundo*). Large spreading tree of rapid growth, 70 feet high; foliage smaller than in other Maples; very frequently planted for windbreaks. Very hardy.

**CATALPA BUNGEI** (Umbrella Catalpa). Grafted on stems four to six feet high, it makes an umbrella-shaped top without pruning. Perfectly hardy and flourishes in almost all soils and climates. Leaves large, glossy, heart-shaped, deep green; lie like shingles on the roof; always make a symmetrical head. One of the most unique trees; a valuable acquisition, desirable for lawn, park and cemetery planting.

**CATALPA SPECIOSA**. A variety which is said to have originated in the West; it is very hardy and a rapid grower and is being extensively planted for commercial purposes; has broad, deep green leaves and beautiful large blossoms, making it a highly ornamental tree for lawn or street. Valuable for planting in groves for growing poles, posts and railroad ties.



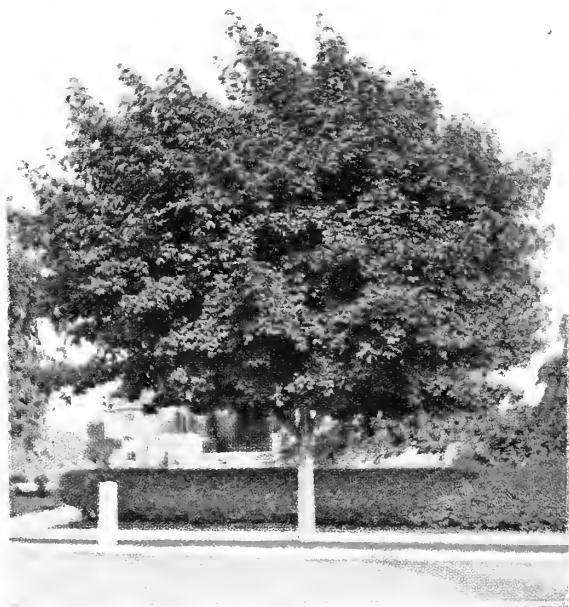
Catalpa Bungei—Umbrella Tree.

## TREES—Continued



American Elms.

**AMERICAN WHITE ELM** (*Ulmus americana*). A magnificent tree growing 80 to 100 feet high with drooping, spreading branches; one of the grandest of our native trees; makes a beautiful lawn or street tree.



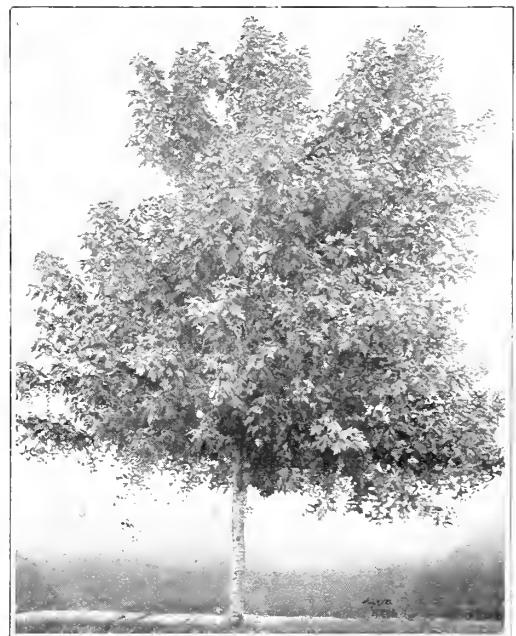
Sugar or Hard Maple.

**HACKBERRY** (*Celtis occidentalis*). Resembles Elm somewhat, foliage more pointed and a bright glossy green; bark thick and rough; a symmetrical grower; good street tree; drought resistant.

**HONEY LOCUST** (*Gleditsia triacanthos*). A rapid-growing native tree with powerful spines and delicate foliage; the greenish flowers appearing in early Summer are followed by flat pods 8 to 10 inches long; used extensively for hedges.

**RUSSIAN MULBERRY** (*Morus*). Good shade and ornamental tree, rapid grower, excellent wind and snow break; most valuable to supply the native birds, thus keeping them from the more precious fruits. Fruit of little value.

**NORWAY MAPLE** (*Acer platanoides*). A large, handsome tree, with broad, deep green foliage; has a very compact growth; a valuable tree for parks, lawns or streets.



Silver Maple.

**SILVER LEAVED or SOFT MAPLE** (*Acer dasycarpum*). A rapid growing tree of large size, irregularly rounded form; foliage bright green above and silver beneath; a favorite street and park tree. See illustration.

**SUGAR or HARD MAPLE** (*Acer saccharum*). A well known native tree, valuable both for the production of sugar and wood; very desirable, but a slow grower.

**JUDAS TREE or REDBUD** (*Cercis canadensis*). A medium size tree with large irregular head and perfect heart-shaped leaves. The profusion of delicate reddish pink blossoms with which it is covered in early Spring before the foliage appears make it one of the finest ornamental trees.

## TREES—Continued

**CAROLINA POPLAR** (*Populus eugenei*). Very strong growing tree of broad, columnar shape. Does not produce the annoying "cotton" of the native cottonwoods.

**LOMBARDY POPLAR** (*Populus nigra italica*). In shape this is the exclamation mark among trees. Its towering spire has an individuality all its own. For tall screens and backgrounds, this tree is admirable.

**BOLLEANA POPLAR** (*Populus Bolleana*). A very tall, narrow-topped tree, shaped like the Lombardy Poplar. Leaves dark green above, white and cottony on the under surface. Much more graceful and attractive in appearance than the Lombardy.

**ROSE ACACIA.** Native shrub grafted on Black Locust. Branches are covered with stiff prickles. Has long clusters of pea-shaped, rose colored flowers in drooping racemes. Foliage light green. A very good ornamental.

**AMERICAN SYCAMORE or PLANE TREE** (*Platanus occidentalis*). A well known tree. Very common throughout the United States; leaves heart-shaped at base, short lobes sharp pointed; branches are wide spreading.



Lombardy Poplar.



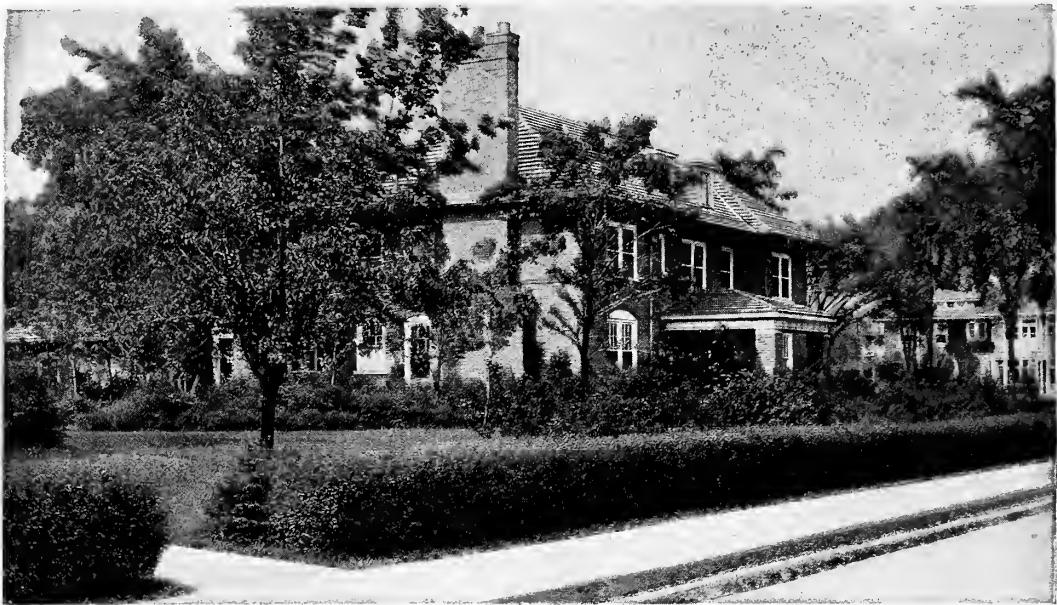
American Sycamore.

## Weeping Trees

**TEAS' WEEPING MULBERRY** (*Morus tatarica pendula*). A graceful and beautiful hardy tree, forming a perfect umbrella-shaped head, with long, slender, willowy branches, drooping to the ground and gracefully swaying in the wind; foliage small, lobed and of a delightful, fresh, glossy green. The tree is exceedingly hardy, of rapid growth and abundant foliage, and can be trained into almost any shape.

**BABYLONIAN WEEPING WILLOW** (*Salix babylonica*). The well known, common Weeping Willow; makes a large tree, covered with drooping branches.

**WISCONSIN WEEPING WILLOW** (*Salix babylonica*, var. *dolorosa*). Of drooping habit and considered the hardiest; valuable on account of its ability to resist severe cold.



Amoor River Privet Hedge.

## Ornamental Hedges

**A**N ornamental hedge speaks for itself. It frames the lawn and gives it a background. On the smaller grounds the low hedges are used, while for larger grounds and for screening purposes, the larger growing kinds are used. In most cases they should be planted one foot apart.

**CALIFORNIA PRIVET.** A vigorous growing variety, of fine habit, thick, glossy, nearly evergreen leaves. If cut to the ground one or two years after planting, it makes a very thick hedge right from the bottom, sending up many strong shoots. The leaves are a rich green, and will remain on the plants up to Christmas. Not as hardy as the Amoor River Privet. Will freeze back to the ground during extreme cold Winters.

**AMOOR RIVER PRIVET** (*Ligustrum amurense*). We consider this the most valuable ornamental shrub for hedges and borders. It grows to a height of 8 to 10 feet but can be pruned to any height and sheared to desired form. In the Spring it is covered with small, white blooms. It is perfectly hardy and will not winter-kill during severe Winters like the California Privet.



*Berberis Thunbergi*—Japanese Barberry.

**JAPANESE BARBERRY** (*Berberis Thunbergi*). Used extensively where a good, dwarf, bushy hedge is desired. The foliage is an excellent green which turns to a beautiful coppery red in the Fall, followed by pretty red berries. It is not susceptible to wheat rust. Can be grown either trimmed or untrimmed, with a height of from  $1\frac{1}{2}$  to 3 feet.

# Peonies

## *"The Queen of the Garden"*

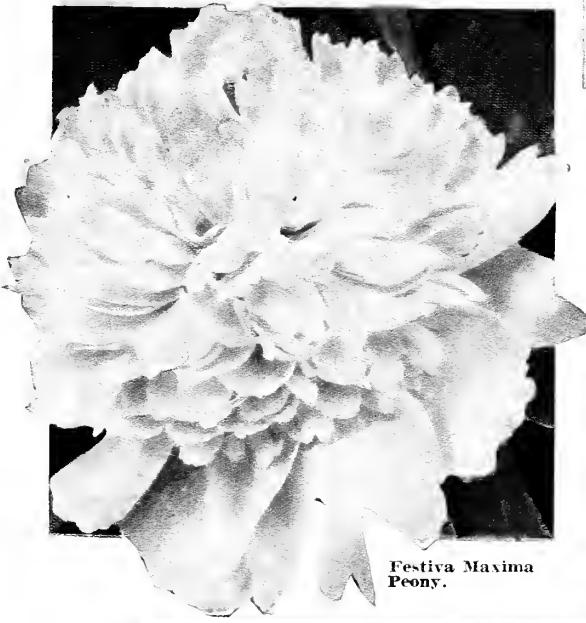
No flowers exceed the Peonies in popularity, and none are more easily grown. They are seldom attacked by insects or disease, and are perfectly hardy, requiring no covering in the severest weather. They thrive in all kinds of soil and flourish in a rich deep loam.

Distance to plant, 2 to  $2\frac{1}{2}$  feet apart. For field culture rows should be  $3\frac{1}{2}$  to 4 feet apart.

Plant Peonies so that the tops of the crowns or eyes are three inches under the surface of the ground. A covering of leaves, straw or manure late in the Fall will protect them during the Winter. This should be removed early in the Spring.



Edulis Superba Peony.



Festiva Maxima Peony.

**EDULIS SUPERBA.** Pink. Large, loose crown type. Bright pink with slight violet shadings at base of petals. Fragrant. Early, strong and upright in habit, very free bloomer. Best early commercial pink.

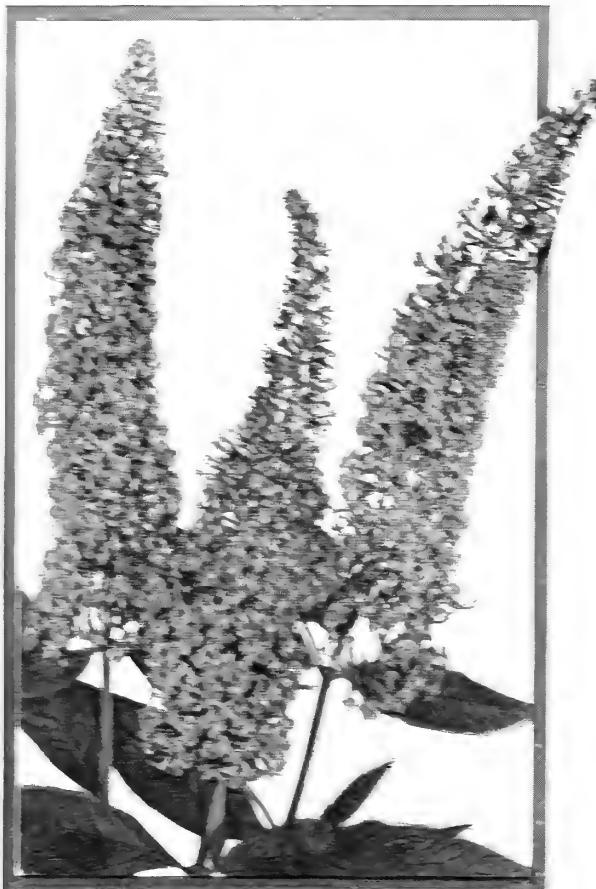
**FESTIVA MAXIMA.** Large, full double bloom, color pure white with an occasional carmine spot; strong grower; one of the best of the white varieties. Early.

**FELIX CROUSSE.** Red. Large, compact. Deep rose-red. Fragrant. Strong, robust grower. Free bloomer. Called by many growers the best one-color red in cultivation. Medium season.



Border Planting of Felix Crousse Peonies.

# Flowering Shrubs



Butterfly Bush.

## Althea-Rose of Sharon

*Althaea Syriacus*

The Altheas are fine free-growing flowering shrubs of very easy culture. Desirable as accents of borders in August and September, when nearly every other shrub or tree is out of bloom. They are of good size, many colored varieties. Butterly hardy and can be had in various colors if desired. Entirely free from all insect pests, always gives delight and satisfaction, requires pruning each Spring. We can supply Altheas in the following colors: Blue, pink, purple, red, white and variegated.

## Berberis Thunbergi Japanese Barberry

A pretty dwarf species that will form almost any clumping and will grow in most any place. Its dense foliage of bright green oval-shaped leaves which are on the most brilliant shades of copper red and orange in autumn and which remain on until late Fall. The slender, graceful, thorny branches are lined with small scarlet berries which hang until well into Winter and help give life to the shrubby border, especially when there is snow on the ground. Used for foundation and garden plantings and hedges. Does not harbor wheat rust. Height 2 to 3 feet.

PEOPLE generally are appreciating more the permanent value and beauty of shrubs. The charm and grace they lend to home grounds is invaluable, and if judicious selection is made, it is possible to have a continuous succession of bloom from early in April to the days when the frost again nips the flowers of the very latest to bloom.

In many cases it would be better to plant shrubs in groups of several to one side of the lawn instead of following the method of planting one in a certain place and spoiling the effect of the open lawn. In most cases, three, six, eight or twelve of one variety should be used in a particular grouping. Several such groupings make an excellent border or foundation planting.

## Buddleia Butterfly Bush

So named because blooms attract large numbers of butterflies. This fact makes the plant very interesting, especially to children. Matures first year and dies down like a pony. Blooms profusely. Has colored varieties, pink, red, white, 3 to 4 inches long. Height 3 to 4 feet.



Althea.

## SHRUBS—Continued

### Deutzia

**PRIDE OF ROCHESTER.** Produces large rose flowers, fragrant with rose fragrance. Grows 6 feet high and 4 feet in diameter.

**GRACILIS.** Slender branched Deutzia. Grows 3 feet high. Flowers pale white, 2 inches in diameter. Fine for rock culture and shrub borders.

### Kerria

**JAPOONICA.** Handsome and graceful with pointed leaves and long branches from the ground covered in June with bright yellow flowers which continue throughout the summer.

### Crab

**BECHER'S DOUBLE-FLOWERING.** This is one of the most beautiful of all the large growing shrubs. Can be trained to a tree or left to take the place of a small tree. Grows to the size of a small tree in the flowering season as covered in this with very double delicate pink blossoms that look almost like the medium sized roses. The perfume is wonderful. Stems and branches are covered with the perfume of the wild rose. The small trees love more sun than trees and shrubs like "Lilac" and "Peaches."



BECHER'S Flowering Crab.

### Forsythia Golden Bell

**FORTUNE'S FORSYTHIA.** A beautiful shrub of medium size. Flowers are of a bright yellow and appear before the leaves very early in the Spring. Large groups; the best of the early-blooming shrubs.



Forsythia—Golden Bell.

### Prunus Glandulosa

Prunus Glandulosa  
Flowering Almond

**PINK DOUBLE-FLOWERED ALMOND.** A graceful beautiful tree covered in May with rose colored blossoms like small roses. Hardy.

**WHITE DOUBLE-POWERED ALMOND.** Same as above except blossoms are pure white.



Flowering Almond.

## SHRUBS Continued



Hydrangea *Paniculata Grandiflora*.

### Caragana Pea Shrub

These plants are characterized by a clean-cutness and simplicity of effect that is appealing. A rather thin coating of foliage is offset by a remarkably interesting green bark with showy lenticels. Bright yellow, pea-shaped flowers in Spring. Plant in sun if possible.

### Hydrangea

**ARBORESCENS STERILIS** (Hills of Snow). This grand American shrub deserves increased attention. Handsome foliage and showy, snow-white, ball-shaped clusters of flowers make it a most conspicuous object wherever grown. Blooms the greater part of Summer, does its best under all circumstances, is perfectly hardy and increases in size and beauty from year to year. Does best in moist, fertile soil with full exposure to the sun.

Thrives most anywhere and does well even if neglected.

**PANICULATA GRANDIFLORA**. A beautiful, tall shrub with leaves of bright, shiny green; flowers borne in huge panicles from 8 to 12 inches long, light pink, changing to brown later in the Fall; blooms in August and September; can be grown in tree form successfully and makes a very desirable lawn ornament.



Hydrangea *Arborescens Sterilis*—Hills of Snow.

## SHRUBS—Continued

### Sambucus - Elder

**GOLDEN ELDER.** A handsome shrub, with golden yellow foliage and clusters of pure white flowers. Excellent for lawn planting.

### Cydonia - Japan Quince

**SCARLET** (*C. japonica*, also *Pyrus japonica*). One of the best flowering shrubs; flowers a bright scarlet-crimson, borne in great profusion in early Spring; foliage retains its color of bright glossy green the entire Summer; hardy; make good hedge plants.

### Lonicera Bush Honeysuckle

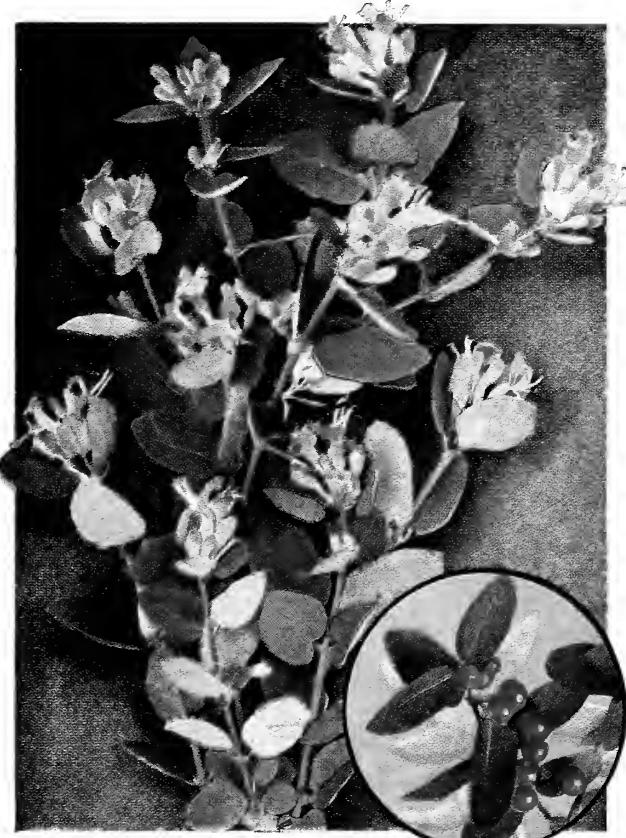
**PINK TARTARIAN** (*L. tatarica rosea*). Pink flowers that make a lovely contrast with the foliage; planted with the White Tartarian, the two make a beautiful display.

**RED TARTARIAN** (*L. tatarica rubra*). Blooms early in the Spring; flowers a beautiful bright red.

**WHITE TARTARIAN** (*L. tatarica alba*). Produces creamy white, fragrant flowers in May and June; forms a high bush.



Golden Elder.



Flowers and Fruit of Pink Tartarian Honeysuckle.



White Tartarian Honeysuckle.

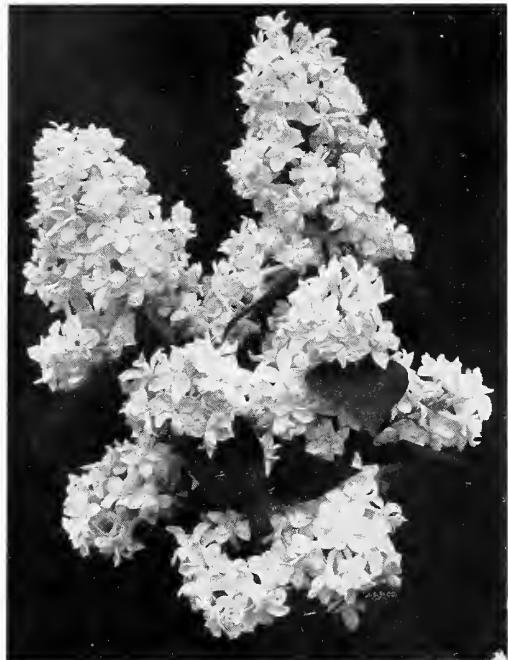
## SHRUBS—Continued

### Lilacs

The Lilacs are well known, beautiful shrubs, indispensable in every collection.

**COMMON PURPLE.** The old-fashioned Lilac, which grows into a very high bush, with bright green, heart-shaped leaves. In May the plant is crowned with its wondrous wealth of light purple flowers in clusters. It is, without doubt, the best known and most popular shrub grown, and notwithstanding the introductions of so many new flowering shrubs of late years, the Lilac holds its own. A fine, tall shrub for the lawn and one of the best for a fancy hedge. Can be used to a good advantage in making effective backgrounds for smaller shrubs. Hardy everywhere.

**COMMON WHITE.** This is substantially the same as the purple, save in the color of its flowers, which are pure white. In May it forms one of the most charming sights the garden affords, with its handsome clusters of exquisite fragrant flowers shining out in contrast with the bright green, heart-shaped leaves. Try these. We know you will be delighted.



White Lilac.

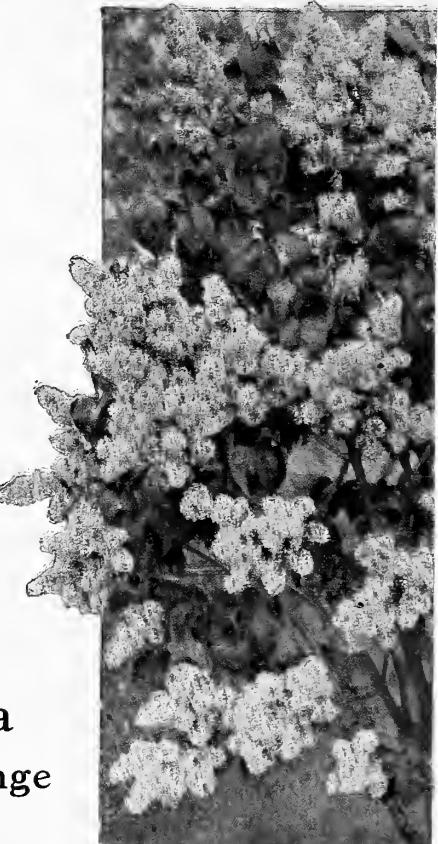
**PERSIAN.** Purple. Blooms a good deal more than the Common, and has smaller leaves. Does not sprout as much from the roots. We prefer the Persian for the flowers, but the leaves of the Common are decidedly prettier.

### Elaeagnus - Russian Olive

While this plant really is a small tree, yet when it is kept pruned rather severely, it forms a most attractive shrub. Its foliage is of a remarkable silvery hue, showing up in striking contrast to that of the green of other shrubs or trees. It is admirable for tall backgrounds where unusual color tones are desired. It also is useful for hedges, either trimmed or untrimmed.



Syringa—Mock Orange; Philadelphus.



Purple Lilac.

### Syringa Mock Orange or Philadelphus

We have often wondered why more Syringas are not planted. It is simply because few people know the remarkable beauty of the shrub. The Syringa is just as beautiful as the Spirea Van Houttei of which we sell thousands each year, and it is twice as large a bush. It grows to a height of from 8 to 9 feet, is broad in proportion and covered with beautiful foliage. In the blooming season the entire shrub is covered with great waxy white flowers from one and one-half to two inches in diameter. The Syringa has a wonderful perfume. A single shrub in bloom will scent an entire city block with the odor of the orange blossom.

## SHRUBS—Continued

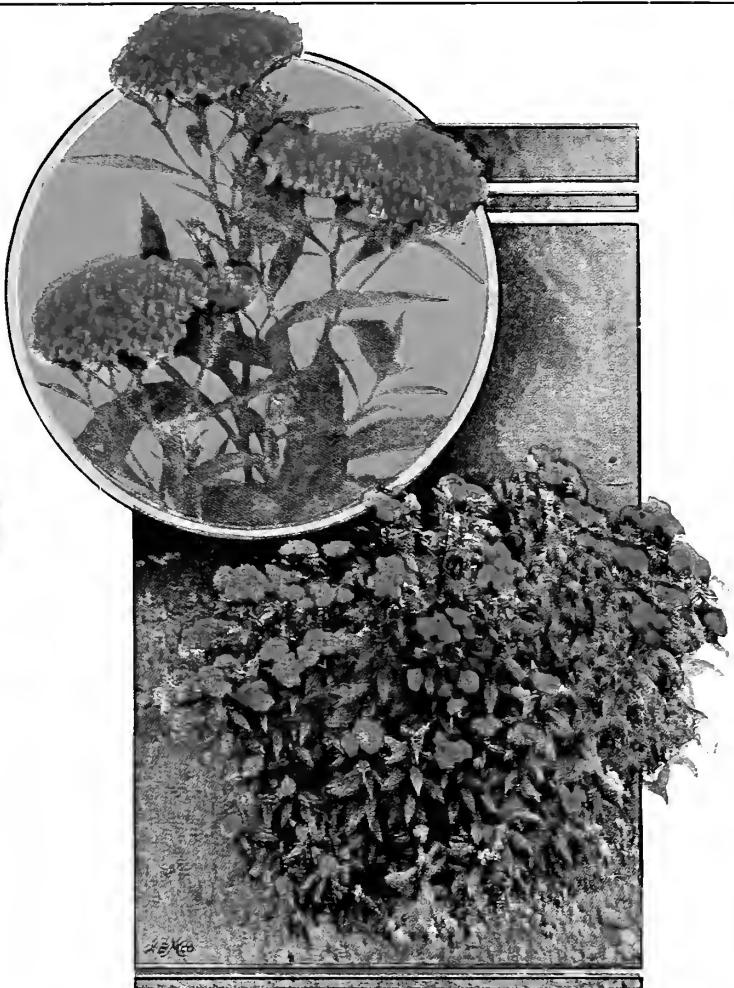
### The Spireas

This group of shrubs affords the greatest range in size, habit and color of flowers of any commonly cultivated ornamentals. Spireas are of great beauty when in bloom and of large value for a great variety of decorative purposes.

**CALLOSA ALBA.** An upright shrub, becoming 18 inches to 2 feet high. Very profuse bloomer, and continuing in flower throughout the Summer. Flowers pure white, in flat-topped clusters.



White Snowberry.



Spirea Anthony Waterer.

**ANTHONY WATERER.** A very popular, low-growing bush, becoming 2 feet high and constantly in bloom all Summer. Flower clusters large, flat topped and of deep rose color.

**THUNBERGI.** A very graceful, early-flowering shrub, the slender branches clothed with feathery, bright green foliage. Flowers pure white in early Spring.

**BILLIARDI.** Tall, erect shrub with canes terminated by feathery plumes 5 to 8 inches long, of dainty pink color.

**VAN HOUTTEI.** This is the most popular of all the Spireas, and is more largely planted than any other one shrub. Its gracefully arching branches heaped as they are with the white blossoms in Spring, and its thriftiness under the most trying of conditions, are the reasons for its popularity. It is adapted to many purposes in outdoor decoration and wherever it is put it thrives, always giving beauty and cheer in return.



Spirea Van Houttei.



Viburnum—Snowball.

## SHRUBS—Con.

### Viburnum Snowball

**COMMON SNOWBALL** (*V. opulus sterile*). Grows 6 to 8 feet high, the old-fashioned Snowball; its large globular clusters of pure white flowers are produced in May and June, and make a very attractive appearance.

### Cornus Dogwood

**SIBIRICA** (Red-Twigged Dogwood). Good for border groupings, where the smooth, slender, bright red branches in Winter make a very pleasing contrast with evergreens and snow. Small white blossoms early in Summer. Good foliage. Thrives in shade.

### Symphoricarpos Snowberry

Flowers small, pink, in June or July; foliage dark green; berries large, white, and hang well into Winter.



High Bush Cranberry.



Fruit of *Cornus Sibirica*—Red Twisted Dogwood.

### Viburnum Opulus

**HIGH BUSH CRANBERRY** (*V. opulus*). A magnificent large shrub, with upright and spreading form. The leaves are broad, oval, three-lobed and bright green. The small, white flowers, which appear in early Summer, are borne in broad, flat clusters surrounded by a ring of large, sterile flowers. These are followed by very showy scarlet berries which cling to the bush all Winter, as they are not disturbed by the birds. It will thrive and grow to perfection in the coldest climates or where the extremes of heat and cold are greatest.

## SHRUBS - continued

### Tamarix

**AFRICANA.** A beautiful shrub with small leaves; similar to the Juniper; flowers are pink, small and delicate, borne on long spikes; blooms in May.

### Weigela - Diervilla

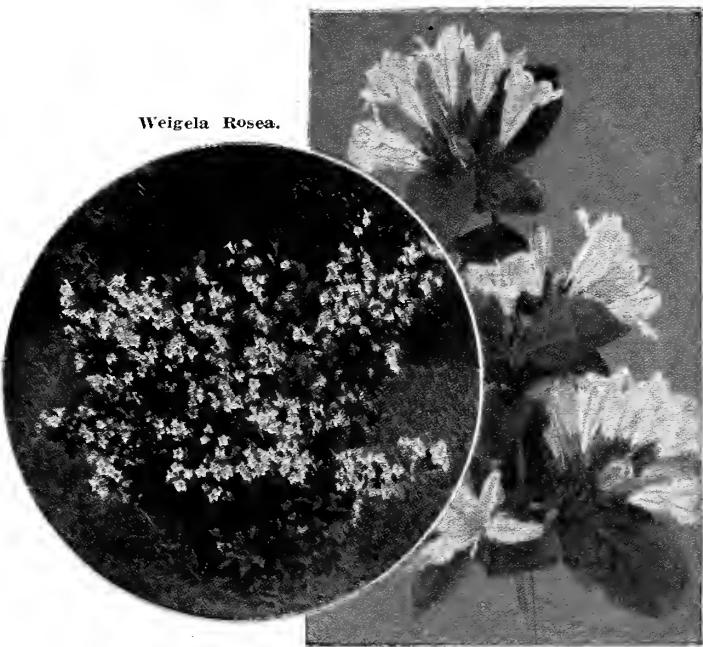
The Weigelas are shrubs of erect habit while young, but gradually spread and droop as they acquire age; flowers are large, trumpet-shaped, of all shades and colors; very effective for grouping and borders; blossoms are produced in June and July.

**CANDIDA.** Flowers pure white produced in June and continue to bloom nearly all Summer.

**EVA RATHKE.** Flowers a brilliant crimson; a beautiful clear, distinct shade.

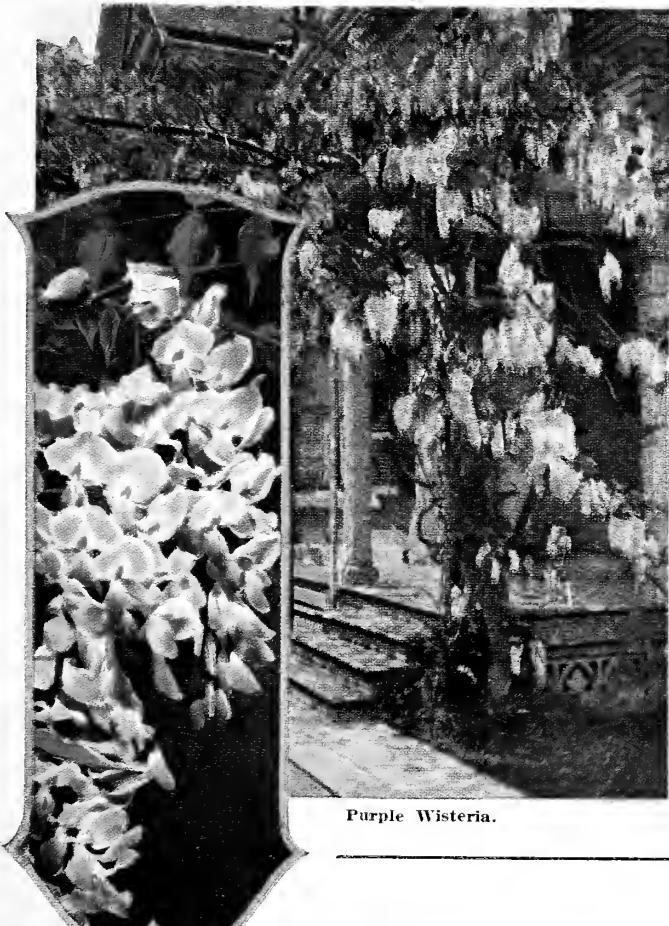
**ROSEA.** An elegant variety with fine rose colored flowers appearing in June.

**VARIEGATED** (*D. nana variegata*). This is perhaps second to no other hard-wooded plant with variously colored leaves. It stands the sun well and retains its well marked tints until Autumn. The flowers are lighter in color than the Rosea, but it is equally as free in bloom.



## Hardy Climbing Vines

**V**INES are useful in many ways. They give quick results when planted on a new place, before trees and shrubs become established. For covering fences, rocks, walls, banks and trellises, they are peculiarly adapted. A porch without a vine is desolate and incomplete.



Purple Wisteria.

### Clematis

Of all the vines used for either shade or decoration, none can compare with the Clematis in its many and various forms. As a climber for the veranda, a screen for fences, for pillars, along garden walks, for training on walls or arbors, in masses or rockwork, it has no rival among the strong-growing, blossoming plants. Their delight is in rich soil and a sunny situation. They should be well mulched with rotten manure in Winter.

#### LARGE-FLOWERING CLEMATIS

**HENRYI.** Flowers creamy white and very large; a fine bloomer.

**JACKMANI.** This variety is better known than any other, and still stands as one of the best. It is a strong grower, and produces a mass of intense violet-purple flowers four to six inches in diameter, from July until October.

**MADAME EDOUARD ANDRE.** Flowers are a beautiful shade of crimson; a free bloomer.

### Wisteria

**CHINESE PURPLE** (*W. sinensis*). One of the best of the Wisterias; rapid growing and elegant, attaining 15 to 20 feet in a season; flowers a pale blue, borne in long pendulous clusters in May and June.

## CLIMBING VINES - continued

### Lonicera - Honeysuckle

**HALL'S JAPAN** (*L. Halliana*). A strong, vigorous vine with pure white flowers, changing to yellow; foliage remains green well into the Winter; very fragrant and covered with flowers almost the entire season; one of the best bloomers.



Hall's Japan Honeysuckle.

### Small Flowered Clematis

**PANICULATA**. A great novelty from Japan. This variety of Clematis has proved to be one of the most desirable, useful and beautiful of hardy garden vines; a luxuriant grower, profuse bloomer, and possessing fine foliage.



Clematis Paniculata.



Ampelopsis Quinquefolia—American Ivy or Virginia Creeper.

### Ampelopsis

**QUINQUEFOLIA** (American Ivy or Virginia Creeper). A very rapid growing vine covered with heavy digitate leaves affording shade and of great beauty when changing to scarlet in Autumn.

**VEITCHI** (Boston or Japan Ivy). The now famous Japan or Boston Ivy used so extensively to cover brick or stone buildings. The foliage is dense, completely carpeting a surface, and the autumnal tints of green and red are unsurpassed for beauty.

### Bignonia

(Trumpet Creeper)

**RADICANS**. A high climbing, vigorous vine, native to the Middle West and South. Leaves compound, produced on stout, spreading branches. Flowers in large, terminal clusters, trumpet-shaped, 3 inches long. Loved by humming birds.

## Table Listing Shrubs and Vines Described in This Book Arranged in the Order in Which They Bloom During the Season

Allowance must be made for variations in locality, as the blooming period listed below applies to this section of Kansas (near Kansas City, Mo.). In Oklahoma the same shrubs will bloom earlier, while in Northern Missouri, Iowa, Nebraska and Northern Illinois, the blooming period will be later.

### UPRIGHT SHRUBS

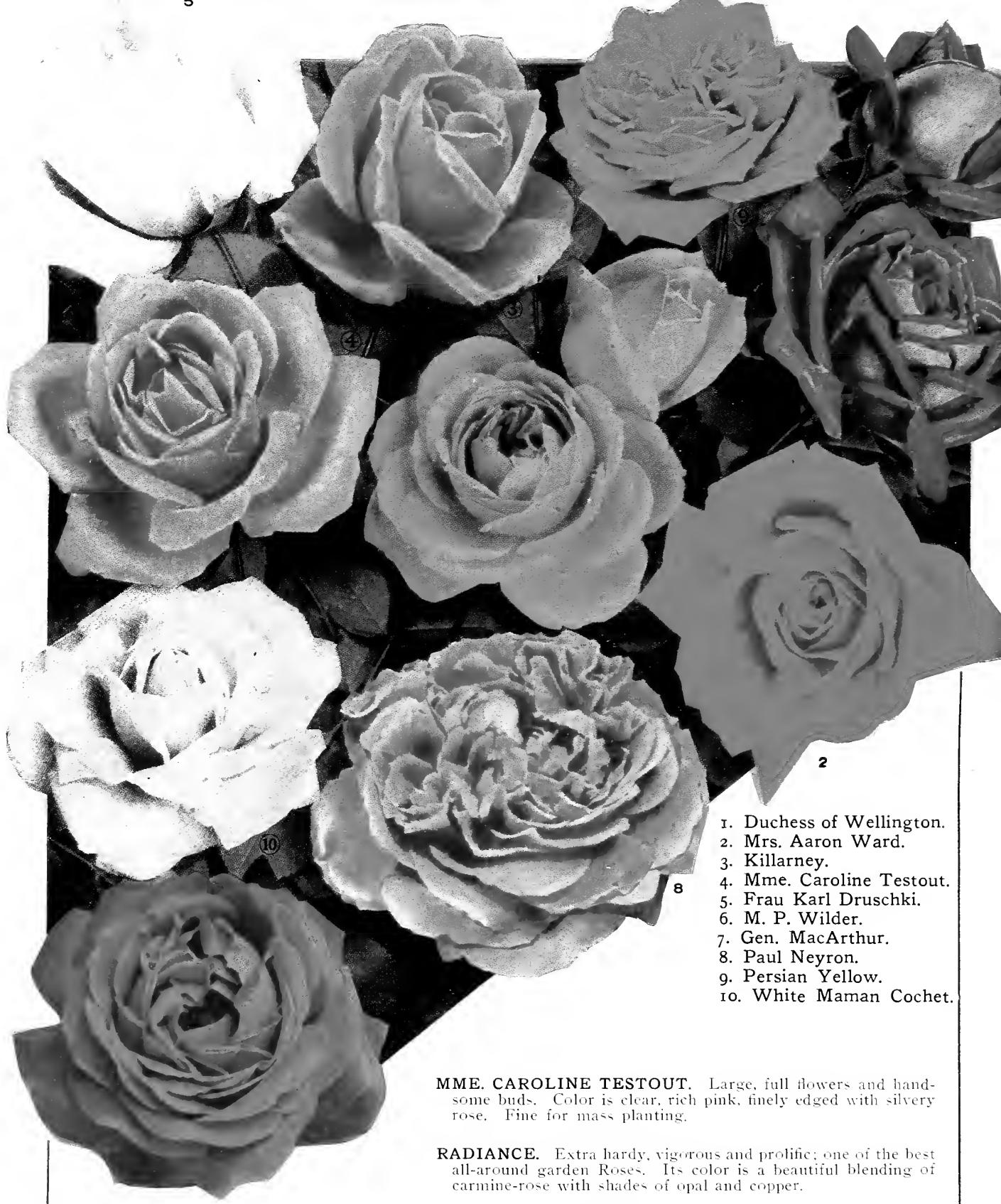
Blooming Period	Variety	Color of Flower	Grows to an Approximate Height of	Other Characteristics
March-April	Forsythia (Golden Bell)	Yellow	8 ft.	
April	Spirea Thunbergi	White	4 ft.	
April	Almond, Double-Flowering			
April	Japan Quince	Pink-White	5 ft.	
April-May	Crab, Bechtel's	Scarlet	6 ft.	
April-May	Upright Honeysuckle (Tartarian)	Delicate Pink	12 ft.	Bears fruit (not edible)
April-May	Lilacs	Red-White-Pink	10 ft.	
May	High Bush Cranberry	White-Purple	10 ft.	
May	Deutzia gracilis	White	8 ft.	
May	Deutzia, Pride of Rochester	White	3 ft.	
May	Snowball, Common	White	6 ft.	
May	Spirea Van Houttei	White	8 ft.	
May	Syringa	White	6 ft.	
May	Caragana	Yellow	6 ft.	
May-June	Tamarix	Lavender	10 ft.	
May-June	Barberry Thunbergi	Yellow	3-4 ft.	
May-June	Dogwood, Red Twigged	White	6 ft.	Variegated foliage in Fall Colored bark in Winter
May-June	Syringa	White	10 ft.	
May-June	Weigela candida	White	6-8 ft.	
June	Weigela rosea	Pink	5-6 ft.	
June	Weigela, Variegated Leaf	Pink	5-6 ft.	
June-July	Golden Elder	White	8-10 ft.	Yellow foliage; bears berries
June-July	Hydrangea arborescens sterilis (Hills of Snow)	White	5-6 ft.	
June-July	Weigela, Eva Rathke	Red	5 ft.	
June-July	Spirea Anthony Waterer	Scarlet	2-3 ft.	
June-July	Spirea callosa alba	White	2-3 ft.	
June-August	Kerria japonica	Yellow	4 ft.	
July	Snowberry	Pink	4 ft.	
July-August	Spirea Billardi	Pink	5-6 ft.	
July-September	Butterfly Bush (Buddleia)	Blue	4 ft.	
July-September	Althea	White-Pink-Red-Purple	6-8 ft.	
July-September	Hydrangea P. G.	White turning Pink	4-5 ft.	

### PEONIES

May-June	Peonies	White-Pink-Red	2-3 ft.	
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### CLIMBING VINES

June-July	Clematis, Large-Flowering	White-Red-Purple	8 ft.	
Aug.-Sept.	Clematis paniculata	White	8 ft.	
May-June	Wisteria	Purple-White	12-15 ft.	
May	Honeysuckle, Hall's Japan	White-Yellow	10 ft.	
July-August	Bignonia (Trumpet Vine)	Orange-Red	15-20 ft.	Leaves change to a beautiful scarlet in Fall
	Ampelopsis quinquefolia		15-20 ft.	
	Ampelopsis Veitchi		15-20 ft.	Leaves change to a beautiful scarlet in Fall



1. Duchess of Wellington.
2. Mrs. Aaron Ward.
3. Killarney.
4. Mme. Caroline Testout.
5. Frau Karl Druschki.
6. M. P. Wilder.
7. Gen. MacArthur.
8. Paul Neyron.
9. Persian Yellow.
10. White Maman Cochet.

**MME. CAROLINE TESTOUT.** Large, full flowers and handsome buds. Color is clear, rich pink, finely edged with silvery rose. Fine for mass planting.

**RADIANCE.** Extra hardy, vigorous and prolific; one of the best all-around garden Roses. Its color is a beautiful blending of carmine-rose with shades of opal and copper.

**RED RADIANCE.** Similar in all respects to the Radiance, differing only in color, this being a fine rich red which does not fade nor dull with age. We recommend this variety for its constant and abundant blooming habit, for its healthy growth, rich color and delicate fragrance.

**GENERAL MacARTHUR.** For years this Rose has been one of the foremost of the red Hybrid Teas for bedding. It is a most continuous bloomer, keeping up an array of brilliant glowing crimson-scarlet flowers from early in May until frost comes. It is deliciously scented and the blooms come on long stems, suitable for cutting. A favorite, as it produces perfect blooms and does well even during the hot months of Summer.

# Roses—*The Queen of Flowers*

## **Everblooming Hybrid Teas**

**GRUSS AN TEPLITZ.** Dark rich crimson, passing to velvety fiery red. An exceptionally free bloomer and one of the brightest colored red Roses grown. The canes are strong and vigorous, producing blooms constantly from June till frost. An almost continuous bloomer.

**JONKHEER J. L. MOCK.** The color is carmine on the outside, and imperial pink on the inside of the flower. The blooms are very large, perfectly formed, and highly perfumed. Plant an entire Rose bed of this one kind. Very satisfactory for bedding.

**KAISERIN AUGUSTA VICTORIA.** This is one of the most beautiful Roses grown. Its extra large, exquisitely formed flowers are borne singly on strong, upright stems, making it very popular as a cut flower. Buds are long and the flowers very full, deep and sweet scented. Color soft white, slightly tinged lemon-yellow.

**KILLARNEY.** Flowers intensely fragrant. The buds are large, long and pointed. Color is exquisite—a brilliant imperial pink. A bed of these beauties in full bloom is a sight not easily forgotten. An ideal Rose for cutting.

**LA FRANCE.** Both buds and flowers are of lovely form, grand size, and very highly perfumed. Color peach-blossom-pink, clouded with rosy flesh. This delightful old-fashioned variety is constantly in demand.

**LOS ANGELES.** Produces a continuous succession of long-stemmed flowers of a luminous flame-pink, toned with coral and shaded with translucent gold at the base of the petals; in richness of fragrance it equals in intensity the finest Marechal Niel. The buds are long and pointed.

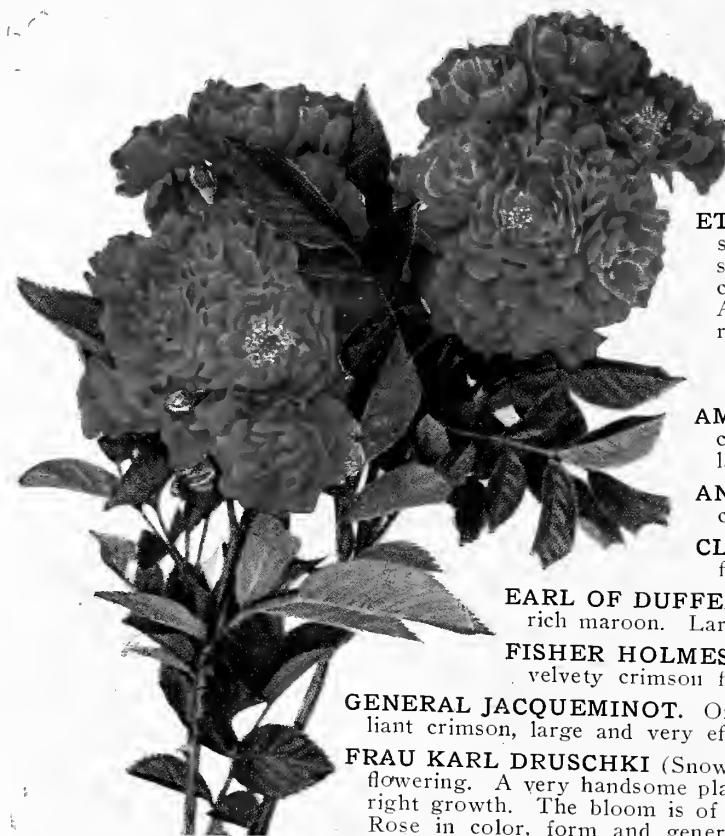
**MRS. AARON WARD.** Fine Indian yellow, sometimes washed with salmon-rose. Flowers are full double and as attractive when full blown as in the bud state. The young foliage is a rich bronzy green. This Rose will probably produce more blooms for you than any other yellow Hybrid Tea.

**DUCHESS OF WELLINGTON.** The best yellow Rose to date. Buds are long and pointed. Flowers are richly scented and freely produced. Bush a good grower, spreading habit and unusually free from insect pests. More hardy than many varieties of the Hybrid Tea class.

**MAMAN COCHET.** This is the famous pink Cochet. Light pink shaded with salmon-yellow, outer petals splashed with light rose; extremely large and full; fine for cut flowers; needs to be well protected in Winter.

1. Los Angeles.
2. Kaiserin Augusta Victoria.
3. Red Radiance.
4. Maman Cochet, Pink.
5. Jonkheer J. L. Mock.
6. Gruss an Teplitz.





Crimson Rambler  
Climbing Roses.

**MRS. JOHN LAING.** Soft pink, beautiful form, exceedingly fragrant, and very free-flowering.

**PAUL NEYRON.** Said to be the largest Rose in cultivation; bright, clear pink, very fragrant.

**ULRICH BRUNNER.** Rich crimson-scarlet, highly perfumed, vigorous and hardy; a very desirable sort.

### Baby Rambler Roses

**BABY DOROTHY.** In color and form resembles Dorothy Perkins. When in full bloom, plant almost hidden by the flowers.

**BABY RAMBLER.** Red. One of the best hardy bedding Roses; flowers are borne in clusters of twenty or more to the cluster. Perfectly hardy and is good for pot culture for Winter blooming. Color a bright crimson-pink.

**WHITE BABY RAMBLER.** The same as Baby Rambler, with white flowers.

### Rugosa Roses

**F. J. GROOTENDORST.** This hybrid is unlike any other Rugosa in having the beauty and freedom of bloom of the Baby Ramblers, but with the rugged foliage and hardiness of the Rugosa. It was originated by a Holland nurseryman and introduced by F. J. Grootendorst, for whom it is named. In luxuriance of bloom, and in sturdiness, this rose has fairly leaped into the greatest popularity. It is the grandest of the red-flowered Baby Ramblers, and blooms continually all Summer. Splendid for low hedges or edgings.

### HYBRID TEA ROSES—Continued.

**WHITE MAMAN COCHET.** A sport from Maman Cochet with creamy white flowers, faintly tinged with blush; long and pointed buds opening to large flowers; an exceedingly pretty and valuable variety. Needs good Winter protection.

**ETOILE DE FRANCE.** Intensely brilliant crimson, with the center cerise-red. A deliciously sweet-scented rose. The flowers are large, of cupped form, very full and abundantly produced. A strong-growing, free-blooming Rose that we recommend highly.

### Hardy Hybrid Roses

**AMERICAN BEAUTY.** Deep pink approaching crimson, of exquisite form and fragrance, and large size.

**ANNA DE DIESBACH.** Beautiful shade of carmine; very large and fragrant; quite hardy.

**CLIO.** One of the best; large, fine, globular form, flesh color, shading to rose in center; vigorous.

**EARL OF DUFFERIN.** A beautiful velvety crimson shaded with rich maroon. Large, full flowers of delightful fragrance.

**FISHER HOLMES.** Of elegant form and good substance; deep velvety crimson flowers with brilliant scarlet centers.

**GENERAL JACQUEMINOT.** One of the most popular of the red Roses; brilliant crimson, large and very effective, very fragrant and one of the hardiest.

**FRAU KARL DRUSCHKI** (Snow Queen). Pure paper-white, large and free-flowering. A very handsome plant, with bright, heavy foliage and strong, upright growth. The bloom is of perfect form, on fine long stems. The finest Rose in color, form and general finish. If, after each blooming period, the branches are cut back, it will bloom continuously throughout the season.

**MARSHALL P. WILDER.** Extra large, full deep red; a free bloomer and very handsome.



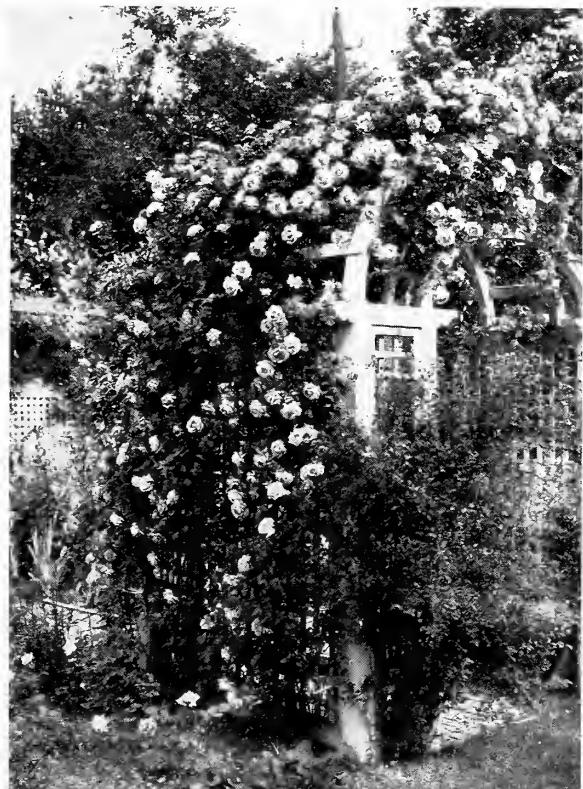
F. J. Grootendorst Roses.

# Best Hardy Climbing Roses

**CLIMBING AMERICAN BEAUTY.** Rich red, fragrant. Very vigorous in growth and a prolific bloomer, having hundreds of perfect flowers open at one time.

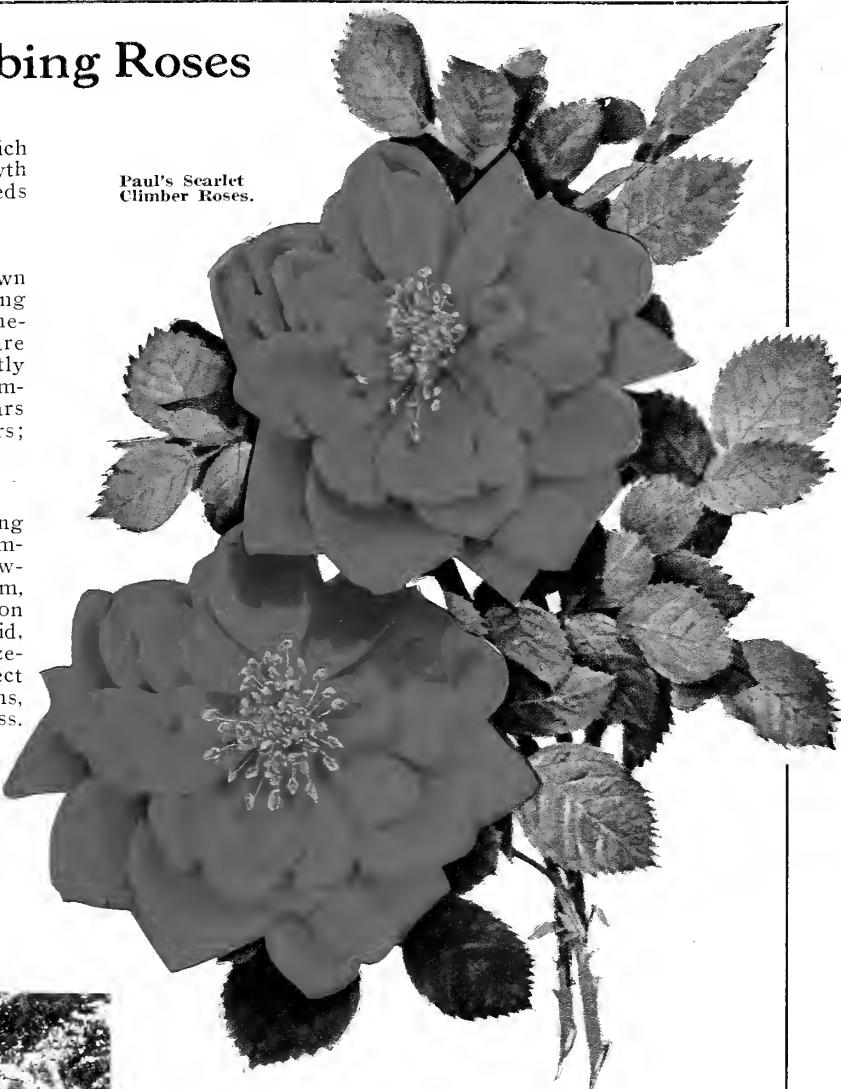
**CRIMSON RAMBLER.** The best known and most popular of all the climbing Roses. A rapid grower, making sometimes 10 to 15 feet in a season; flowers are borne in clusters of 15 to 25 perfectly shaped blossoms of a rich glowing crimson; when in full bloom the vine appears to be a perfect mat of rich red flowers; perfectly hardy everywhere.

**DR. W. VAN FLEET.** No other climbing Rose has ever created such favorable comment as Dr. W. Van Fleet, for the flowers are so perfect in every way—form, color, delicate fragrance—and borne on such long, strong stems. The splendid, hearty growth, beautiful shiny bronze-green foliage, crimson thorns, and perfect hardiness, added to the exquisite blooms, make this the choicest Rose in this class. The color is a remarkable, delicate shade of flesh-pink on the outer surface, deepening to rosy flesh in the center. Flowers full and double, delicately perfumed; buds pointed; stems 12 to 18 inches long, fine for cutting.



Climbing American Beauty.

Paul's Scarlet Climber Roses.



**DOROTHY PERKINS.** This is one of the new Rambler types; has the same strong habit of growth as the Crimson; flowers are borne in large clusters of 25 to 30 and are a beautiful shell-pink; individual flowers are larger than those of Crimson Rambler.

**EXCELSA** (Red Dorothy Perkins). This is identical with Pink and White Dorothy Perkins in growth and blooming qualities. The color is a brilliant crimson, making it one of the most showy Roses grown.

**PAUL'S SCARLET CLIMBER.** No other Rose in any class can compare with it for brilliancy of color, which is a vivid scarlet. This color is maintained without burning or bleaching until the petals fall. It makes a brilliant display during long season. Blooms are of medium size, semi-double, very freely produced in clusters of three to six flowers each. Plants are literally covered with flowers from top to bottom. It is of strong climbing habit and perfectly hardy.

**TAUSENDSCHOEN** (Thousand Beauties). A rapid growing, almost thornless climber showing the blood of the Rambler, Polyantha and Tea parentage. Its innumerable flower clusters make a pretty show in June and July; at first, the soft pink of Clothilde Soupert, and later deepening to a bright red carmine-rose.

# Successful Planting, Pruning and Care

## CARE OF STOCK

The bundles should be opened immediately, the roots dipped in water, then heeled in moist ground so that the mellow earth will come in contact with the roots and thoroughly protect them from the air, having the earth tramped solidly about them.

When ready to plant, take up only a few at a time, puddle the roots and do not allow them to lie exposed to the sun or air.

The ground should be carefully prepared by deep plowing and firming down with a disc and harrow.

## PLANTING

The holes for planting must be large enough to receive the roots freely, without cramping or bending them from their natural position. All broken or mutilated portions of the roots must be cut off so as to leave the ends smooth and sound. All trees should be planted two or three inches deeper than they stood in the nursery row; pack the soil very firmly about the roots by tamping with the feet or post tamper, being careful not to bark or break the roots. Leave three inches of the surface soil loose to serve as a mulch. If the ground is very dry apply one to two pails of water before this soil mulch is in place, and after the water has soaked away it can then be placed over the moist soil.

## SUITABLE DISTANCE FOR PLANTING

Apples—30 to 40 feet apart each way.  
Standard Pears and Cherries—20 feet apart each way.  
Plums, Peaches and Apricots—16 to 18 feet apart each way.  
Dwarf Pears and Quinces—10 to 12 feet apart each way.  
Grapes—rows of 10 to 16 feet apart; 7 to 10 feet in rows.  
Currants and Gooseberries—4 feet apart.  
Raspberries and Blackberries—3 to 4 by 5 to 7 feet.  
Strawberries, for field culture—1 by 3 to  $3\frac{1}{2}$  feet.  
Strawberries, for garden culture—1 to 2 feet apart.

## MULCHING

Unless thorough surface cultivation will be practiced during the Summer a mulch should be applied. This may be a layer of coarse manure or vegetable matter around the trees three to six inches

deep, and extending out from the trees three to five feet. Mulching protects the soil against the sun and drying winds; against alternate freezing and thawing, and provides some plant food.

## NUMBER OF TREES OR PLANTS TO THE ACRE

40 feet apart each way .....	28
30 feet apart each way .....	48
20 feet apart each way .....	110
18 feet apart each way .....	135
15 feet apart each way .....	205
12 feet apart each way .....	300
10 feet apart each way .....	435
8 feet apart each way .....	680
6 feet apart each way .....	1210
5 feet apart each way .....	1745
4 feet apart each way .....	2725
3 feet apart each way .....	4840

**Rule**—Multiply the distance in feet between the rows by the distance the plants are apart in the rows, and the product will be the number of square feet for each plant, which, divided into the number of square feet in an acre (43,560), will give the number of plants or trees to the acre.

## PRUNING

The pruning of trees should begin when they are planted. The transplanting of a tree marks a very critical point in its life history, and to neglect careful and proper methods of planting and pruning at that time is to invite disaster or, at least, unsatisfactory returns from one's efforts.

**Apple and Pear**—Select from three to five of the branches to form the permanent head of the tree. These branches should be well distributed around the trunk, and at safe distance apart up and down the trunk. If two branches come out, one exactly opposite the other, forming a crotch, a split may occur at this weak point in later life, when the tree is full of fruit. Shorten these selected branches to about five buds, cutting the branches just above a bud that points outwards. Remove all the other branches close to the trunk, leaving no stub longer than one-eighth to one-quarter inch. Also shorten back two-thirds the central leader of the tree, if one exists, else the tree assumes a too upright growth for best results in later life.

**Cherry**—Five or six good limbs, well distributed around the trunk will be sufficient to form a well balanced top. The limbs left after pruning should not be cut back as severely as recommended for some other classes.

**Plum**—Cut back all branches to about two or three buds. After the tree has grown for a year, remove all but four or five branches, but do not cut these back. These limbs will form a permanent framework for the top and subsequent growth may be trimmed to meet the requirements or taste of the planter.

### SMALL FRUITS

**Gooseberries and Currants**—Prepare the ground by deep plowing or spading. Cut the plants back fully one-half. Plant four feet apart both ways, same depth as plants stood in the nursery row, and firm soil well.

**Blackberries, Raspberries, Dewberries**  
These should be set fairly deep, except one-year-old raspberry plants, the new growth of which starts from the crown in the mass of hair-like roots; these should be planted shallow, with the crown not more than one inch below the surface. Too deep planting is often fatal to one-year-old raspberry plants. Plant in rows five or six feet apart, with plants three to four feet apart in the row. Firm dirt around each plant. Keep surface of the ground loose. Water in dry weather during growing season. Mulch in Winter after ground is frozen.

**Strawberries**—Plants should be set and cared for the same as tomato and cabbage plants. Plant in rows three to three and one-half feet apart and twelve to fifteen inches in a row. The cheapest way to grow them is to plant in long rows and tend with a corn plow, using shields. Never allow rows to spread to more than eight or ten inches in width. Cover the plants late in the Fall with one or two inches of prairie hay or stable litter (if free from weed seed). This covering should be removed from the plants in early Spring and left between the rows until the fruit is picked then it should be removed from the patch and the rows cultivated the same as before.

**Grapes**—These should be planted ten to twelve inches deep in holes large enough to admit roots without curling them, pressing soil solid about roots. Cut vines back to within three or four buds of the roots. Keep the ground clean by cultivating; if impossible to cultivate, mulch.

As the vine grows train to trellis.

Prune in February or early March, before there are any signs of new growth. The fruit of the grape is borne only on shoots of the current year's growth, which spring from the wood of last year's growth—hence the importance of annual and intelligent pruning.

**Asparagus**—Prepare ground by deep plowing or spading. Set plants 12 to 18 inches each way, three inches deep, with roots well spread out. Every Fall mulch the bed well with manure.

**Rhubarb**—Prepare ground as for asparagus. Set the plants with crown or eye two inches under ground. Plant three feet apart each way. Mulch in Winter. Give clean cultivation the same as for any other crop.

### SHRUBS

If planted in beds or groups the ground should be spaded deeply and well worked. If shrubs are set as individual specimens they should be planted the same as trees.

Set shrubs at the same depth as they stood in the nursery row, or with their crowns at about the surface of the ground. Water the plants well during the hot, dry weather and keep the ground well stirred around them. Most shrubs require judicious pruning at planting time, and subsequently. When shrubs are planted it is advisable to cut them back from one-half to two-thirds with few exceptions.

### HEDGES

**Privet**—Dig trench twelve inches deep or more and set the plants four to six inches deeper than they stood in the nursery row, or deep enough so the lower branches will be four to six inches under the ground. Such deep planting will make a compact hedge down to the ground line, but if the plants are set shallow there will always be undesirable open spaces at the base of the hedge. Some planters set Privet in a double row, eight to ten inches apart each way, which makes a very dense hedge. Cut Privet back to six inches when planting to promote thick new growth at lower part of plant.

**Barberry—Spirea**—Should be planted in the same manner as shrubs, either in trenches for hedge or as groups or individual specimens. Cut back and thin out one-half of top wood.

### ROSES

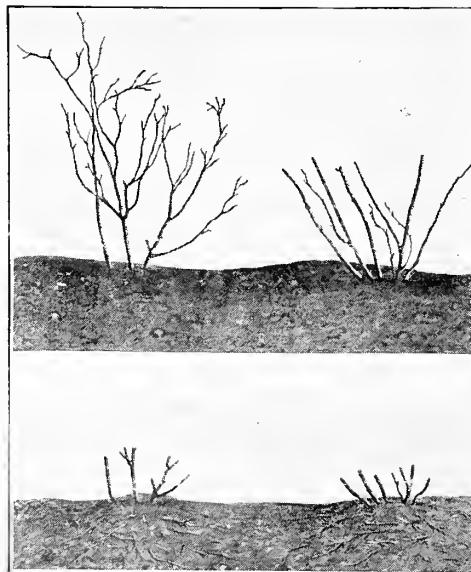
If Roses are planted in the ordinary way with the tops left exposed to the sun and drying winds of the Spring, they are almost sure to shrivel before time for them to grow, and thus the plants are

greatly endangered, while if the following suggestions are followed, success is almost certain. The plants should be unpacked as soon as received from the nursery and planted, if possible. If unable to plant them immediately upon receiving them, they should be heeled-in deep (buried) in moist, loose earth, waiting time to plant. In planting they should be set two or three inches deeper than they stood in the nursery in well-prepared, damp soil, but not wet enough to be muddy. If the soil is dry it is well to plant the Roses solidly, then wet thoroughly and after the water has soaked away, throw up a small mound of earth five or six inches high around the plant. Then cut off the branches about one inch above the mound, leaving it this way for ten days or two weeks, or until the buds start and show a desire to grow, when the dirt mound can be raked down. Roses handled in this way hardly ever fail to make a good start and a very satisfactory growth.

### BULBS AND ROOTS

Prepare the ground by deep spading, twelve to eighteen inches, and work it into a well pulverized condition.

**Peonies**—Should be set with the crown two to three inches below the surface of the ground. Plant two to two and one-half feet apart. Mulch heavily after the ground is frozen and remove mulch in the Spring.



Rose Bushes Just Planted—Before and After Trimming.

**Iris**—Should be set with the crown two inches below the surface. Plant twelve inches apart. Mulch as for Peonies.

**Phlox**—Set the crown one inch under the surface and spread out the roots. Firm well. Mulch in Winter. Water in Summer. Plant twelve inches apart. Gailardia, Delphinium, Platycodon and other perennials should be planted about like Iris and Phlox.

### SHADE TREES

**Ornamentals**—Dig holes large enough to accommodate all roots without bending or cramping. Fill the hole with good top dirt and firm it hard. When the hole is three-fourths full, allow a bucket or more of water to seep away around the roots, after which the hole may be entirely filled. It is well to mulch the tree immediately to prevent drying out. **Prune all limbs back to five or seven good buds**, even though the appearance of the tree is impaired by such treatment. Water trees during the Summer months and give them plenty of attention until they have become well established. Large sizes of shade trees can often be staked to advantage until their roots have obtained good anchorage in the soil.

### EVERGREENS

These should be planted extremely solid, but be sure that all vacancies under the pronged roots are well filled with soil first, then press or tamp the soil so solid that the tree cannot be easily pulled up, leaving two inches of the soil loose to prevent baking and to take in the rainfall. Be careful **never to expose the roots** to the sun and air long enough to dry them in the least, and if necessary to water them, it is better to dig a hole by the side of the tree one foot deep and water them through the holes. This applies to the watering of all trees. Better to water two or three pailfuls at a time in seven or eight days, as needed, than to pour water on the surface, which often does more harm than good, by crusting the surface and attracting the roots upward for moisture, instead of downward. Mulch with old hay or chaff, throw a little soil on the mulching and it will look better and will be more effective. Evergreens should be watered during a drought in mid-summer or Fall as well as Spring. The ground should be filled with water at the approach of Winter and then mulched. They do not need the above care after the first year. After planting protect evergreens in yard by placing a screen about each to keep dogs away.

# SPRAYING

HERE are four distinct types of troubles to combat, ie: chewing insects, sucking insects, scale insects and fungous diseases. Chewing insects are controlled with a stomach poison, some form of arsenic (lead arsenate), sucking insects, (lice or aphis) by body contact poison, (nicotine) or miscible oil (kerosene emulsion), and fungous diseases by lime-sulphur solution or Bordeaux mixture. Be sure you know what you are spraying for since arsenate of lead will not control lice or aphids, nor will nicotine or kerosene emulsion control apple worms and neither of these will have any effect on apple scab or other fungous diseases. Lime-sulphur is used as a dormant spray for scale insects and also for fungus. In spraying the apple, keep in mind the two main apple troubles in the Central West, codling moth and apple scab, and in controlling these most other troubles are incidentally controlled. Lead arsenate and lime-sulphur or Bordeaux mixture are the sprays to use.

## SPRAYING MATERIALS

The most common and best form of arsenic used is "Arsenate of Lead." This may be secured from drug stores and seed and garden supply houses. Thoroughly dissolve three pounds of paste arsenate of lead or 1½ pounds of dry arsenate of lead in a small amount of water in a pail and add to fifty gallons of water or other spraying solution.

Bordeaux Mixture is prepared by dissolving four pounds of copper-sulphate (bluestone), in a small amount of water and diluting to twenty-five gallons; slackening five to six pounds of good lime and adding water to make twenty-five gallons. These solutions should then be combined by pouring or dipping simultaneously from each into a third vessel or spray tank.

The commercial lime-sulphur is used almost exclusively by many fruit growers. This may be obtained from same sources as arsenate of lead or direct from manufacturers. To combine the fungus spray and the insect spray simply add the dissolved poisons to the fungus solutions.

Kerosene in its natural, undiluted state, is fatal to all insect and vegetable life, but properly prepared may be used safely and with much benefit: Dissolve a bar of Ivory soap in one gallon of hot water, then add two gallons of kerosene and churn it vigorously until cool. If made right it is thick like cream, and will keep indefinitely. For general use take one part of the mixture to ten parts water and use as a spray. Will be found very valuable in getting rid of aphis, mealy bugs, red spider, etc. May be used against any soft-shelled insect.

## WHEN AND HOW TO SPRAY

GRAPE			
What to Spray For	Treatment	When to Spray	Remarks
Anthracnose Black Rot Mildews	Bordeaux Mixture	(1) Just before buds open (2) After blossoms have fallen Two or three others at 10-14 day intervals.	Careful winter pruning and disposal of diseased wood with application of Lime-Sulphur (winter strength) in dormant season aids in anthracnose control
Berry Moth Leaf Hopper	Bordeaux with 2 lbs. Arsenate of Lead	Follow program recommended above when these insects are prevalent	Dusting with fine sulphur is recommended for some vines of European origin for mildew control

### BLACKBERRY, RASPBERRY AND DEWBERRY

Anthracnose	Lime-Sulphur as directed	(1) In spring before growth starts (2½ gal. in 50) (2) When new shoots are 6-8 inches high (1¼ gal. in 50) (3) Just before blooming period. Dilute as in (2)
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### CURRENT AND GOOSEBERRY

Leaf Spot Anthracnose	Bordeaux	Beginning as soon as the leaves are opened make five to seven applications at two-week intervals	
Current Worm	Arsenate of Lead, 2 lbs. to 50 gals. water.	At the first appearance of the worms. If there are two broods repeat spray	Dry hellebore may be dusted on, if near picking time.
Current Plant Louse	Nicotine sulphate, 1 to 800 of water	Soon after eggs hatch in Spring (soon after the leaves open)	Thoroughness necessary, hitting all leaves from beneath

### STRAWBERRY

Leaf Spot	Bordeaux	Before blossoms open. Additional applications if spot appears	Renew beds frequently. May mow off and burn foliage after berries are picked
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### APPLE

Scale Insects	Lime-Sulphur, 1 to 8; Scalecide Miscible Oils	In dormant season; when trees are leafless	Protect men and animals at work from caustic action of Lime-Sulphur on the skin
Apple Aphids (Lice)	Nicotine, 1 to 800, added to Lime-Sulphur, 1 to 40	In spring when buds are bursting showing green tips	Of no use after leaves are curled. Use high pressure
Scab Black Rot Bud Moth Cankerworm Tent Caterpillar	Lime-Sulphur, 1 to 40, with 2 lbs. Arsenate of Lead	When flower buds show pink, but before any have opened. (Other sprays as recommended for codling moth, below, will incidentally control troubles in this group)	In severe cases of cankerworms use Paris Green 4 ozs. in fifty gallons of water with twice as much slaked lime
Codling Moth	Lime-Sulphur, 1 to 40, with 2 lbs. Arsenate of Lead	(1) When most of the petals have fallen (calyx spray) (2) Approximately three weeks after the bloom (3) Approximately ten weeks after the bloom (4) Fifteen to seventeen weeks after the bloom	After weather becomes hot (from about July 1) discontinue Lime-Sulphur and use Bordeaux with 2 lbs. Arsenate of Lead Necessary in South where there may be three broods in one season
	Arsenate of Lead, 2 lbs. to 50 gals. water	(1) As in (2) under codling moth (above) except two weeks after bloom in South	Clean orcharding assists in curculio control. Spraying not always wholly effective
Blotch Curculio	Lime-Sulphur, 1 to 40, with 2 lbs. Arsenate of Lead	(2) Approximately five weeks after the fall of the bloom (3) As in (3) under codling moth (above)	Arsenate of Lead may be omitted if no curculio is present
	Bordeaux, 4-4-50, with 2 lbs. Arsenate of Lead	Usually checked as incidental results of applications recommended above	More common in regions where air and water drainage is poor
Sooty Blotch Fly Speck			
Bitter Rot	Bordeaux	Where disease is looked for begin spraying in early summer, making applications often enough to keep fruit coated	
Apple Rust or Cedar Rust	Spraying not effective	Remove cedar trees nearby	The rust cannot live without cedars on which it spends part of the year
Blight		See under Pear, Fire Blight	

### PEACH AND PLUM

What to Spray For	Treatment	When to Spray	Remarks
San Jose Scale European Fruit Scale	Lime-Sulphur, 1 to 8	When tree is dormant	
Curculio Brown Rot Leaf Spot	Lime-Sulphur, 1 to 50, with 2 lbs. Arsenate of Lead	Similar to cherry, which see	Brown rot spreads very rapidly in warm, moist weather and can be controlled only if fruit is kept coated

### PEAR

Fire Blight	Spraying ineffective	In some cases, where particular care is taken, prompt and severe pruning at the first sign of blight, disinfecting tools and wounds with corrosive sublimate solution, may check its spread to some extent	
Scale Insects Blister Mite Pear Psylla	Lime-Sulphur, 1 to 8; Scalecide Miscible Oils	In dormant season, preferably early spring	Scrape dormant trees and burn all orchard trash to aid in psylla control
Practically all the other common diseases and insects on the apple are also found on the pear to some extent. See methods of control under apple.			

### CHERRY

Curculio Brown Rot Leaf Spot Shot Hole Fungus	Lime-Sulphur, 1 to 50, with 2 lbs. Arsenate of Lead	(1) Just before buds open (2) Immediately after blossoms fall (3) About ten days after (2) (4) Additional sprays if necessary at two-week intervals	In some localities it may be safer to dilute the Lime-Sulphur somewhat, preventing foliage injury
Cherry Aphis	Nicotine sulphate, 1 to 800	When aphids first appear, before they have caused the leaves to curl	Be careful to cover under side of leaves. Use high pressure and soap
Cherry Slug	Arsenate of Lead, 2 lbs. to 50 gals. water	On first appearance of insects	

### ROSES, FLOWERS AND VINE PLANTS

Slugs (small green worms on under side of rose leaves)	Three-fourths pint "Black Leaf 40," 4 lbs. soap in 100 gals. water	Spring and summer	Spray whole plant thoroughly, especially under side of leaves
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### SHADE TREES

Caterpillars Measuring Worms Canker Worms	3 lbs. Arsenate of Lead to 97 gals. water	Spring and summer	
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